THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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Abortion in the Cow.

EDITORS OF FARMERS' CABINET,—There have been many complaints among our farmers, during the present, as well as past winters, on account of the frequent occurrence of *abortion* among their cows. We are greatly at a loss to trace the evil to any known cause, and consequently to prescribe a remedy. I extract the following from the first number of the Farmer's Encyclopedia, recently published by Carey & Hart, and which I have been much interested in looking over. This disease, if we may call it so, is one of no trifling annoyance: and is perhaps one of the greatest to which the dairyman is exposed. It deserves and requires the close attention of experienced, practical men. We have this winter, heard of some farmers in the vicinity of Philadelphia, who have lost eight or ten calves, that have come to premature births. Should you believe the extracts I send, deserving a place in your paper, you will gratify a constant

READER.

Abortion occurs oftener in the cow than in all other domestic animals put together. Perhaps it is one of the greatest annoyances the proprietor of cows has to encounter, and unfortunately, for aught we see to the contrary, it is likely so to continue; for in spite of the improved state of veterinary medicine, and the researches of skilful veterinary surgeons, both at home and abroad, abortion still continues as frequent and annoying as ever. The causes are frequently involved in obscurity; but it may be mentioned, that an extremely hot and foul cow-house, a severe blow, violent exertion, starvation, plethora, an overloaded stomach, internal inflammations, constipated bowels, bad food or water, improper exposure and the like, will now and then produce abortion. Any thing whatever, indeed, that seriously affects the health of the animal in general, or the state of the reproductive organs in particular, may do so. But abortion occurs again and again, when no such causes as those enumerated, can be traced. The disease, if such it may be called, as we think it may, is even said to be infectious. No sooner does it show itself in one animal than it is seen in another, and another, till it has spread over the most part of the cow-house. Some say this is to be attributed to the odour arising from the things evacuated. Possibly it may be so, there is nothing unreasonable in the supposition; for although we cannot perceive the smell, nor account for its peculiar influence, it is still quite within possibility that such an odour does exist, having the power attributed to it. There can be no great harm, however, in acting as if we were assured that the mischief has its origin in the source so commonly supposed, provided we do not shut our eyes to any other which accident or investigation may reveal. In the meantime, the number of abortions may be diminished by carefully avoiding all those causes which are known to be capable of producing it. Let the cows be regularly fed; let their food be good, and in proper quantities; let them have water as often as they will take it; avoid sudden exposure to cold or heat; and, above all, let the cow-house be well ventilated. Prohibit all manner of rough usage on the part of those who look after the cows, whether they be with-calf or not. If any of them accumulate flesh too rapidly, gradually reduce their allowance; and, on the other hand, if any become emaciated, discover the cause, and remedy it, always by slow degrees. Sudden changes in the matter or mode of feeding, should also be avoided. The same sort of diet does not agree equally well with all the cows; and this, in general, is indicated by undue relaxation, or constipation of the bowels; this should be watched, and removed at once. Attention to these, and many other minor circumstances, will amply repay the proprietor for the little additional trouble.

"That improper, or too little food," says

Mr. Lindsay, "is a prominent cause of abortion, is strongly indicated by the following facts. A friend of mine, a respectable grazing farmer, kept a dairy of 22 cows, 10 of which slipped calf at different periods of gestation. The summer had been very unfavourable in every respect, both as regarded the ground where the cows were pastured, and in getting in the hay crop. He had little or no hay of the last year's growth, and the hay of that year when cut into, was in a very bad state; but as he had no other, he was obliged to give it to his cattle. The consequence was as mentioned above; and besides, many of his stock died of various disorders; and many of those which recovered, remained long weakly."

"The most common cause of abortion in cows," says White, "is improper feeding during winter and spring, before they are turned to pasture. The filthy pond-water they are often compelled to drink, and feeding on the rank fog-grass of October and November, especially when covered with hoar-frost, are likewise frequent causes of miscarriage. I remember a farm near Berkeley, in Gloucestershire, which afforded a striking proof of the injuries of stagnant pond-water, impregnated with dung and urine. This farm had been given up by three farmers successively, in consequence of the losses they sustained through abortion in their cattle, their not being in season (that is, not conceiving,) red water, and other diseases. At length, a Mr. Dimmery, after suffering considerably in his live stock for the first five years, suspected that the water of his ponds, which was extremely filthy, might be the cause of the mischief. He therefore dug three wells on his farm, and having fenced round the ponds to prevent his cattle from drinking there, caused them to be supplied with well-water, in stone troughs erected for the purpose; and from this moment his live stock began to thrive, became uncommonly healthy, and the quality of the butter and cheese made on his farm was greatly improved. It should be observed, that on this farm the cattle were regularly fed with good hay during the winter, and kept in good pasture in summer; so that there cannot exist a doubt that the losses sustained by Mr. Dimmery, were entirely attributable to the unwholesome water the animals were compelled to drink."

"In order," adds Mr. White, "to show that the accident of warping may arise from a vitiated state of the digestive organs, I shall here notice a few circumstances tending to corroborate this opinion. In January, 1782, all the cows in the possession of farmer D'Euruse, near Grandvilliers, in Picardy, miscarried. The period at which they warped, was about the fourth or fifth month. The accident was attributed to the excessive heat of the preceding summer; but as the water they were in the habit of drinking was extremely bad, and they had been kept upon oat, wheat, and rye straw, it appears to me more probable that the great quantity of straw they were obliged to eat, in order to obtain sufficient nourishment, and the injury sustained by the third stomach, in expressing the fluid parts of the masticated mass, together with the large quantity of water they probably drank, while kept upon this dry food, was the real cause of their miscarrying. A farmer at Charentin, out of a dairy of 28 cows, had 16 slip calf, at different periods of gestation. The summer had been very dry, and during the whole of this season, they had been pastured in a muddy place, which was flooded by the Seine. Here the cows were generally up to their knees in mud and water, and feeding on crowfoot, rushes, and the like. Part of the stock had recently been brought from Lower Normandy, where they had all been affected with indigestion, by feeding upon lucerne, from the effects of which they had been relieved by the operation of paunching. In one, the opening made, was large enough to admit the hand for the purpose of drawing out the food; the rest were operated on with a trocar. In 1789, all the cows in the parish of Beaulieu, near Mantes, miscarried. All the land in this parish was so stiff as to hold water for a considerable time; and as a vast quantity of rain fell that year, the pastures were for a long time, and at several periods, completely inundated, on which the grass became sour and rank. These, and several other circumstances which have fallen under my own observation, plainly show that keeping cows on food that is deficient in nutrition and difficult of digestion, is one, if not the principal, cause of their miscarrying. It is stated by Mr. Handwin, that feeding in pastures, when covered with white frost, has been observed to occasion abortion in these animals."

If there be any probability of a cow miscarrying, from exposure to any of the common causes already enumerated, let her by all means, be put apart from the others; and let a skilful person attend to the evil from which she is expected to suffer. If the approach of abortion be evident, bleeding may be had recourse to; for if it do not check abortion, it will yet do no harm though it take place. When there are any premonitory symptoms of abortion, they are pre-

cisely the same as those which present themselves in ordinary labour, with the exception of their being less marked.

Fumigation of the cow-house is resorted to as one of the means of preventing the spread of abortion: tar, sulphur, gunpowder, feathers, and the like, are burned for the purpose of destroying the odour. We have never seen a single instance of the practice being attended with the smallest success; while it is obvious that, if carried beyond a certain point, it may produce the very evil it is intended to remove or mitigate.

It is a remarkable feature in the history of this complaint, that those cows that have once miscarried, are particularly liable to do so again, at the same period of their succeeding pregnancy. Greater care is therefore requisite to guard against those causes which do, or are supposed to excite it. The treatment of abortion, when it does take place, differs not from that adopted in cases of parturition, only that the cow which miscarries, should be removed with all that belongs to her, from among pregnant cows.

If the signs of approaching abortion, be discovered early, the accident may sometimes be prevented. If the cow is in good condition, then immediately let it be bled to the extent of five or six quarts, and the bowels opened with half a pound of Epsom salts, three or four drams of aloes in powder, or as many ounces of castor oil, administered in a quart of gruel; but if the cow is in very poor condition, and the miscarriage is anticipated from her having been exposed to cold, it would be more advantageous to avoid bleeding, and give her a warm gruel drink, with an ounce of laudanum in it. If after this, abortion does take place, let her be kept in a comfortable place by herself; and if the after-birth has not passed off, let no injudicious and unnecessary administration of violent forcing medicines, such as capsicum or hellebore, be given. Nature, with a little assistance, is generally equal to the perfect restoration of the animal.

For the Farmers' Cabinet.

Absorption of Plants.

Messrs. Editors,—Your very intelligent correspondent and acute observer, as well as first-rate practical agriculturist, W. P. K., who writes with so sharp a pen, must promise *not to cut me off at the knot*, as the saying is, and I will venture to ask, in reply to his observation, that as magnesia is found to be a component part of plants, that, therefore, it must be considered an aliment on which they feed; whether we do not find that plants will readily take into circulation ingredients, not only hurtful, but absolutely destructive to their vitality? Witness the account of experiments on the mint plants, by Jethro Tull—see page 365, of the 4th volume of Cabinet; as also late very interesting facts, relating to the preservation of timber, by filling its pores by absorption, with poisonous substances; as well as colouring matters, to imitate expensive woods. In short, I would ask, whether plants could be injured by ingredients contained in the soil, (of course I do not mean those which are so acrimonious as to be destructive of their organs of vitality) unless they were so taken into circulation. I by no means agree with your correspondent, that no good has resulted from the extended and exciting controversy, which has been carried on through the pages of the Cabinet, on the subject of magnesian lime; for I am one who believes that it is only necessary to set people to thinking, and good must come. It is like casting bread upon the waters, which will be found after many days—after people have *grown* facts for themselves. It is only for us to have patience and give a little time, and the truth will in the end prevail. We esteem that the most highly, which has cost us the most labour and expense to obtain: he then, who has *bought* the truth, will know best the value of it. T.

Delaware.

Late Grazing.—It is a bad practice to suffer the cattle to run out after they have come to the barn. The little they obtain from the fields, saves nothing from the expense of keeping them, and the gnawing of the grass roots, is a serious detriment to the subsequent crop. Sheep, especially, do great injury by close feeding the clover stubble and other sorts of grass, which from its natural fragility and tenderness, is liable to winter kill. As a general rule, all descriptions of animals should be kept up after the descent of the first heavy snow.

Running at liberty, and getting occasionally to the ground, begets a distaste for hay, and renders them fastidious as to food, generally, without conferring any advantage in return. Another important consideration, and one which no prudent and judicious cultivator will ever lose sight of, is the wastage of their manure. Even when animals are suffered to go but a short distance to water, the loss in this particular, is greater than most are prepared to admit. We have ever found that by confining our stock to their yards, during winter, we have succeeded much better than when we pursued the opposite practice, of suffering them to run at large.—*Maine Cultivator.*

New Fertilizing Substances.

Editors of Cabinet,—In the Quarterly Journal of Agriculture for June last, I find an interesting article on the application of salt, salt-petre, nitrate of soda, rape dust, &c., &c., as a top dressing for grass. An experiment is also given that was made by "Mr. Fleming on early potatoes, in 1841," the result of which is highly important, and deserving the attention of all who feel an interest in a multiplication of the means for increasing our crops. The account cannot be more clearly or briefly stated, than in the language of the experimenter. I accordingly forward it, together with Professor Johnston's remarks, for insertion in the Cabinet, if agreeable to yourselves and your readers. It would be exceedingly gratifying if we could have some detailed accounts of experiments of this character made in our own country. Yours, &c., H.

"All were dunged in the usual manner with farm-yard manure, at the rate of about 30 cubic yards per acre. The potatoes were all planted on the 25th of March, on the same *heavy black soil*. The several dressings were applied on the 20th of May, and the potatoes were all lifted on the 28th of September.

No.	Description of top-dressing.	Rate per imperial acre.	Produce per imperial acre.	Weight of produce of 18 yds. drill.	Increase in bolls.
1.	Nothing,	.....	66 bolls.	77 lb.	..
2.	Nitrate of Soda,	160 lb.	80	93 lb.	24
3.	Sulphate of Soda,	200 lb.	73	86 lb.	7
4.	Do. & Nitrate of Soda,	200 lb.	107	124 lb.	41

Note.—The peck is 35 lb. weight, and 16 make a boll or 5 cwt.

"This break of ground consists of a piece of poor clay, mixed with moss, about nine inches deep; subsoil a very stiff blue till. The dung was old from the farm yard, about the ordinary quantity (30 cubic yards per acre,) spread upon the land and dug in. The potatoes were drilled in with the hoe; as the ground was wet the plants came up but weak. The nitrate of soda was sown before the other top-dressings, and had remarkably quick effect, as it showed the third night after being sown. The sulphate of soda does not occasion the dark-green colour which is seen upon the potatoe after the dressing of the nitrate; but there is not the smallest doubt of its beneficial effects, although not in so great a degree as the nitrate. The mixture, which is composed of two-thirds of sulphate of soda, and one-third of nitrate, has a wonderful effect in strengthening the growth, (which it keeps longer than with nitrate alone,) and the mixture has the same effect in producing the dark-green colour as the nitrate alone."

"Professor Johnston, in remarking on this and similar experiments furnished by Mr. Fleming's gardener, observes: 'Those who are the most sceptical in regard to the benefits to be derived from agricultural experiments, when well conducted, will scarcely question the importance of this result—the most backward in making experiments will be anxious to repeat this upon his *own* potatoes. The cost of the mixture to be applied, in the quantity used by Mr. Fleming, is as follows:—

Sulphate of soda, 75lbs. *dry*, at 10s. per cwt., or 150 lbs. in crystals, at 5s.	L. 0 6 9
Nitrate of soda, 75lbs., at 22s.	0 14 9
	L. 1 1 6

"The return for this 21s. 6d., was in each of the above cases upwards of eight tons of potatoes."

'Though the number of experiments made, and inferences which can be safely deduced from them, are far too scanty to admit of our feeling confident of success, yet, it may perhaps be admitted, that they are such as to hold out sufficient encouragement for further prosecuting the inquiry.

'This, I apprehend, can only be successfully done by the united efforts of the practical and chemical agriculturists; the former, by instituting and carefully conducting experiments on a systematic plan; the latter, by tracing the facts so obtained, to the laws of nature, on which they depend, and the progress will, in all probability, be in proportion to the number of practical men who can be induced to engage in making the experiments with precision and accuracy. It would be advantageous, I apprehend, in all cases, to analyze the soil to be experimented on; and to ascertain by weight, the kind and quantity of the material to be applied, as well as the quantity and quality of the produce obtained, from the application of each description of manure. This, however, is an inquiry which cannot be successfully prosecuted by a few individuals, nor can satisfactory results be obtained from a small number of experiments. Diversity of soil,

climate, situation, season, and a variety of other circumstances, combine to throw doubts on results so obtained, however carefully conducted. But this should not deter us from prosecuting the inquiry. On the contrary, it is an additional reason for all, who have it in their power, whether owner or occupier, to contribute their share.

'Assuming then, that the object in view is of sufficient importance to merit the attention of this Society, and that the few experiments which have already been instituted, hold out sufficient encouragement for expecting a successful result, I trust I shall neither be considered presumptuous, nor over sanguine in expressing my hope, that the Society will give the subject their best consideration, and afford such aid as may seem to them best calculated to secure the co-operation of practical agriculturists, in instituting and reporting the results of experiments, carefully made, on a regular and systematic plan. We may not succeed to the full extent, but I cannot help thinking that a wide, fertile, and unexplored field in agricultural improvement, lies before us; and although it would be rash to venture an opinion as to the results, which the combined effect of science and enlightened practice may arrive at, it would be equally rash, and less politic, I apprehend, to rest satisfied with our present knowledge. Let practical men, therefore, establish facts by experiments, carefully made, whether from the suggestions of their own minds, or those of others; and let the duty of tracing these to the principles of nature, on which they depend, be zealously discharged by men of science; and perhaps, the progress may be more rapid, and the success greater, than it would be either wise or prudent to anticipate at present.'

From the New England Farmer.

Produce of five acres of land.

To THE EDITOR,—Though there is much of romance in the accounts sometimes published of large crops, so that a sober-minded man hardly knows how much deduction to make from them in order to believe any part, yet it is also true, that *facts* in agricultural, as well as in other matters, are often stranger than *fiction*. I send you the following statement of the produce of a plot of land, measuring five acres and one and one-sixth rods, for the past year, owned and cultivated by Mr. Joshua Tappan, in Newbury, Essex county, Massachusetts. I was on the piece in October, and from what I saw of the crops harvested, independent of his own statements, I have no doubt of the correctness of the yield as given by him.

Produce of the Lot.

1	ton of hay, worth	$12 00
66	bush. corn,	44 00
42	do. oats,	12 60
6½	tons beets,	33 00
272	bush. carrots,	45 00
12	do. parsnips,	3 00
2	do. ruta bagas,	25
4	do. French turnips,	50
42	do. flat do.	4 20
6	do. cabbages,	50
274	do. potatoes,	54 80
122	do. onions,	40 00
3600	loose cabbage heads,	36 00
1761	good cabbages for market,	26 00
1½	bush. sunflower seed,	1 50
1	peck carroway seed,	4 00
½	peck cabbage seed,	6 00
½	do. turnip seed,	3 00
40	lbs. carrot seed,	17 00
20	do. onion seed,	8 00
2	bush. beet seed,	15 00
4	do. peas,	6 00
2	do. beans,	3 00
120	lbs. sage,	12 00
10	lbs. hops,	80
10	bush. tomatoes,	7 00
11	do. apples,	4 50
4	dollars worth of rhubarb,	4 00
2	do. do. asparagus,	2 00
		$405 65

Yours, &c.,

A. W. DODGE.

Hamilton, Dec. 29th, 1842.

The prices annexed to the above articles are given by the editor, and not by Mr. Dodge. We have put the sums low, generally, and some of them probably, are less than Mr. Tappan sold the marketable part of his crops for. But every one acquainted with farming, well knows that most crops have a refuse, unsaleable portion. This portion is included usually in the gross amount of crop, but cannot be sold for much. For this reason, we must put prices low, or we shall mislead many readers.

The stover, or corn fodder, is not included in the above: it probably was worth from 12 to 15 dollars.

As the quality of the articles was unknown to us, we probably have hit wide from the true mark in many instances. Four hundred dollars worth of products from five acres of land, when prices are low as at present, is a large amount.—*Editor New England Farmer.*

For the Farmer's Cabinet.

London Dairies.

Messrs. Editors,—Your readers are much indebted for a beautiful portrait of that very high-bred bull, Colostra. I had often wondered that so fine an animal had not, long ago, found his way into your pages: we have now, three bulls and two cows of the pure short-horn Durhams, that might perhaps, be termed matchless—all drawn from the life, by Woodside, and engraved expressly for your work—a *Cabinet* in themselves!

But it is a fact much to be deplored, that we seem to expect that every quality which is desirable, must concentrate in one individual breed, without reflecting that, as in England, from whence we derive all our various races, one breed of cattle may be best, under one class of circumstances, and another under others—beef in one, milk in a second, butter in a third, and work in a fourth, without offering disparagement to either, or expecting anything so unreasonable, as an union of all in any distinct breed. But this we have yet to learn, and until the time arrives, I fear we must submit to prejudices and preferences which are not compatible with our real interests. Now no one, perhaps, admires the short-horns more than I, but I am willing to admit that other breeds might vie with them in various ways: in short, as has already been said, it is unreasonable to expect to find any one particular breed possessed of the distinctive qualities of all. I freely admit, that there are instances of great milkers amongst the Durhams; and am aware that the advocates of the short-horns point to the Dairy cows of London, which are of the highest improved breed of Durhams, as proof of the fact, that they are preferable for the use of the dairy; but the history of these cows is not generally known; and I would here state, for the information of those desirous of understanding the matter, that they are selected expressly for the London dairies, over the whole kingdom, at almost any price, as the greatest milkers, and at five years of age—just in their prime; so that it is probable, not more than one cow out of twenty, from the finest dairies of short-horns in the country, may be deemed fit for the London market. As soon as it is safe to remove the calf, which is left behind for rearing, their dams are driven off to London, to supply vacancies formed by sale to the butcher, of those cows that have gone dry, after having been milked, perhaps, for nearly two years: yielding large carcasses of beef, for which there is ready sale, although it is confessedly of inferior quality. Persons undertaking to supply the London dairies with these cows, are always travelling over the country, making contracts, even at the time the calf is dropped, to be delivered at five years old, if a great milker: and hence arises the superiority of the London dairies. But great milkers are not confined to any particular breed; nor are the largest milkers, any more than the largest cows, always the most desirable, even for the butter dairy; for there are other considerations to be attended to; one of which is of peculiar importance, namely, the continuing to give milk nearly up to the time of calving; a qualification which, although deprecated by those whose cows go dry for three or four months before calving, I have never objected to. The Germantown cow, mentioned in your last, must have been a valuable animal, and there are many others of that "no breed," as they have been called, that are remarkable. I have lately heard too, of a pure Devon of the highest blood, belonging to a gentleman near Newcastle, Delaware, which is a real prodigy in the secretion of milk and butter—and have been given to understand that she is intended to compete for the offer of "$500 for the cow of other breed than short-horn, that shall give 14 pounds of butter per week; with 50 cents additional, for every ounce over that weight;" which has been made by a certain spirited breeder of short-horns in Pennsylvania. There is also a very fine cow of the polled breed, whose portrait is now in the hands of Mr. Woodside; an engraving from which would be highly valued by your subscribers, and form a variety in the list which already adorns your pages. It must not be forgotten, that the polled breed of cattle stands A, 1, in the most famous butter county of England—*Suffolk;* and I know many capital polled milkers in this country, the descendants, no doubt, of imported stock of that favourite breed. But we seem not to be aware of the fact, that we have already amongst us, the finest animals of *all* the different breeds of English cattle; and it is only to rid ourselves of the ridiculous preference for one breed over another, be the situation and circumstances what they might—the easily-besetting sin of our country, and of which many shrewd men have taken advantage—and suit the different varieties to our different wants, *as is done in England*, and we should get along much pleasanter, and with far less bickering. And for one, I am pleased to find that public opinion is leaning pretty much to my way of thinking—no disparagement to short-horns either; for they will be found superior stock for many situations, and under various cir-

cumstances, but assuredly, not in all—heterodox as the opinion will appear to many.

At page 20, of the 5th volume of the Cabinet, there is mention made of a young farmer, who never kept a cow that was not a good milker: there is much in this, and I am led to believe that my friend Johnson is right; he keeps a number of cows for the use of the dairy, and in a late correspondence on this subject, he thus expresses himself: "It is true, my cows are all superior—I never keep a bad one. Neither have I any that are too young--I never rear a calf, which you will think strange; but I will let you into the secret, and then you will be as wise as I am. My neighbours, knowing that my cows are very great milkers, are anxious to purchase my heifer calves for rearing; they of course are ready to give me about three times their value for the butcher, and take them at two or three days old. I enter every purchaser's name in a book, and never lose sight of these calves, from whence I select, at three years old, *the best;* often at a price far less than it would have cost me to rear them, taking into account the value of the keep of an animal, as I keep my cows for three years, labour, trouble, and casualties; and leave them the rest, some of which I would not accept at a gift, as dairy cows. My cows are of all colours and breeds, as I have long been convinced, that quality for the pail is not confined to size, breed or colour; but much indeed to feed and age: so it is true, that 'a good cow cannot be of a bad colour.' I am quite amused, when I witness my neighbours waiting until certain young heifers shall *come in*, and certain old creatures *go out*, when they expect to make their full complement of butter; but this time never comes; for a great proportion of these heifers—as is the case with the young of other animals, will prove quite inferior to their parents, and not worth their keep, let alone the cost of their rearing; but they must be retained, because they are of their own breeding." Now does not this look like common sense and reason, and can we not profit by such a lesson? I, for one, mean to try. ZEBU.

January 28th, 1843.

Care of Horses in Travelling.

If you intend that your horse shall perform a long journey, you must take particular care of him at every stopping place. He must have something that he will eat; and he must have grain. It often happens that tavern hay looks better than it really is, and it often looks too bad to be offered to a horse. If you rely on hay to sustain your horse, and that hay is poor, you can expect to make no great progress on your journey the day following.

The best mode is, on a journey, to rely chiefly on grain; but your horse must be used to eating grain before the journey is commenced. Oats are not so solid food as corn, but if you feed wholly on oats, you will need to give no other grain. Horses are seldom injured by oats when they are given at proper times—that is, they should not be given just before starting. It is safer to give the principal part of the grain that the horse is to have, at night. He will then be ready to start early in the morning; his grain will be digested, and it will do him good.

Your cheapest and best mode will be to purchase half a bushel of oats at night, and let your horse have the whole mess. Your taverner will charge you no more than he would for half a peck and the hay. He will say the horse cannot eat much hay if he eats his half bushel of oats, and he will charge for the oats only. The highest tavern price for oats, by the half bushel, may be half a dollar. Well, you will seldom get a horse kept short of that in a large town, though he should have but half a peck of grain.

Some people fear to give grain while the horse is warm; yet they will not hesitate about giving grain just before starting. But it is hard driving after eating, not eating after hard driving, that injures a horse. It is believed that grain is no oftener injurious to the horse when he is warm, than at any other time. Let any man consult his own feelings. Does his food hurt him more when he comes in hot from work and eats it, than at any other time? Is it not violent exercise, after eating hearty, that causes severe pain? Every one who has tried it and thought of it, will answer yes.

Horses have often been ruined by hard driving, soon after being stuffed with grain. How often do we see people at public houses give their horses but little grain at night, for fear they would not eat a due quantity of hay, and then, just before starting, give a larger mess to travel upon! People who seldom travel, and who seldom give their horses grain, will stuff them with this article on the morning of starting. If the grain had been given on the previous night, there would be some chance of its doing good.—*Maine Cultivator.*

A CERTAIN portion of animal food is essential to the full developement of the mental and physical energies of man.

For the Farmers' Cabinet.

Small Stones on Arable Land.

Messrs. Editors,—Your article on this subject, in the last number of the Cabinet, brings to my remembrance a fact, which completely illustrates the doctrine there taught, that small stones are no injury to the crop on arable land; nay, it goes farther, for it proves that on some soils they are absolutely necessary to its well being. The following account may be relied upon, as the circumstance occurred within a mile of the place of my then residence, and was known to all the country round.

A person by the name of Sweet, proprietor of the beautiful farm of Alvington, in the Isle of Wight, England, which lies at the foot of the first chalk formation on the north side of that island, was a *gentleman*, in the best sense of the word, and cultivated his lands for the pure love of the occupation. He was easy in his circumstances; could afford to make experiments, and was pleased when an opportunity offered for so doing. It one day struck him, that his land, which was thickly covered over with small flints, would be much more productive if they were entirely removed; he therefore set to work, and soon collected in the corner of a large field, a mountain of them, and sowed the land with some kind of grain, which, however, totally failed in consequence; for the rains caused the fine chalky soil to run together like soft batter, which, when dry, formed a covering almost as impervious as a sheet of tin; so that the rain could no longer penetrate the earth, but was carried off into the ditches and water-courses by the hardened surface; and thus the crop was literally starved to death. But, nothing daunted, and careless of *what his neighbours would say*, he set to work and carried back the stones, carefully spreading them again over the surface, and the land became fertile as ever. This gentleman, coming afterwards into possession of great wealth, left the farm and went to reside on a large estate in a distant county, but soon found that active occupation—the charm of life—had fled, and with it its pleasures; and the farm of Alvington came into possession of a family by the name of Cheverton, an honour to the profession; who held it many years, and derived much benefit from the above experiment. I have there often seen the most productive crops of wheat, barley, oats, and even turnips, growing on a bed of flints, with not a particle of earth to be perceived between them; and which never suffered from drought in the hottest season.

And it is the easiest thing in the world, to account for the fact above stated; it is but to go into a field and turn up a stone, when a degree of moisture will be found underneath it, in the hottest day; nay more, place your hand on the shady side of a stone while the sun is shining against its opposite face, especially in the after part of the day, and a coolness, and consequent moisture, arising from condensation, will be perceived; all which must be peculiarly friendly to vegetation, on a soil which would otherwise be barren. Stones, therefore, are evidently intended to screen such soils, as without them would be sterile.* And here I must be permitted to remark, there is a passage in the Litany of the Church, which beautifully shows forth the Divine appointment, here and everywhere manifest: it is contained in the simple ejaculation, "O God! who hast made nothing in vain!" and embodies in itself a whole volume of divinity—sermons ever open to our perusal. With this devotional feeling, accompanied by that very trite but expressive maxim of general application—*nothing is impossible to a willing mind*—a man may go through the world with half the danger, trouble and difficulty, which he would otherwise have to encounter, and which befall the generality of mortals; and come out of it with a more thankful, "humble and confiding" mind and temper—a better man, and a much better farmer!

Vir.

Philadelphia, Feb. 24th, 1843.

Punctuality.—Method is the very hinge of business—and there is no method without punctuality. Punctuality produces calmness of mind: a disorderly man is always in a hurry; he has no time to speak to you, because he is going elsewhere, and when he gets there, he is too late for his business; or he must hurry away to another before he can finish it. Punctuality gives weight to character. "Such a man has made an appointment; and I know he will keep it." This conviction generates punctuality in you; for, like other virtues, it propagates itself. Appointments become debts. I owe you punctuality, if I have made an appointment with you; and have no right to throw away your time, if I do my own. Punctuality in *paying the printer*, is a shining virtue, and is one of the requisites to the character of a good member of the community. —*Selected.*

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* How constantly do we perceive, that a living spring takes its rise from beneath a rock, or even a large stone, which may often be found to lie loosely on the surface, or at best, be of accidental location—acting then, it is presumed, on the principle of capillary attraction.

For the Farmers' Cabinet.

Little Delaware against the World.

Messrs. Editors,—Major Reybold's annual exhibition and sale of fat sheep, took place at Philadelphia on the 18th of February. The present year's flock consisted of 150 wethers and ewes, of the different grades of the Leicester breed, from the pure blood, to the single cross between the Leicester buck and the Merino ewe, the first slaughtering amounting to 60 in number, taken promiscuously from the whole; and never was the character of the Bakewell blood more honourably sustained. Forty of these were slaughtered at Sheldrake's tavern, above Twelfth, in Market street: the average live weight being 179 pounds, and five pounds over; dead weight, 108½ and three pounds over, per sheep; with a quality of meat that astonished the beholders, who flocked to examine the sheep while alive, as well as their carcasses, before and after cutting up; at which time the different grades of blood could be traced with the greatest nicety and precision, in the form, as well as in the condition of the animals, and particularly, in the laying on of fat on the different points, according to the degrees of purity of blood—a practical illustration of Bakewell's theory, who used to say, "Only tell me where you will have the fat, whether on the outside or inside, on the fore-quarter or on the hind-quarter; on the rump, or on the breast, and there you shall find it; but I profess to grow mutton, and not soap and candles;" for here was the animal of pure blood, with a small carcase, weighing 120 pounds, and cutting nearly four inches thick through the rib; with a cushion of fat on the rump, and a tail like a pure broad-tailed sheep; with hams like a Berkshire hog; the leg-bone about the length of the palm of the hand, and the bone the size of the little finger, and not two pounds of fat on the kidneys; the three-quarter blood dying *poor*, and the single cross dying *capital*, with plenty of loose fat; all in exact accordance with the different grades. Then came the subdivisions, or variations of form in the same grade, showing where the animal had turned most after the sire or the dam, by the length of the leg or the thickness of the side, particularly of the plate; but most of all in the width of the back, and the kidney fat, which was uniformly small in proportion to the purity of blood, and large, where that was least exhibited otherwise: a proof of the theory, that "all the juices of an animal pass over the back; if that be broad and flat, they there remain, and go to produce outside fat; if sharp and narrow, they pass away, settle inside, and go to form tallow and inside fat."

The present occasion has afforded materials for an admirable lecture on the different breeds of sheep; and it is matter of surprise, that a course of agricultural lectures has not been got up on the principles here exhibited; the first might be made to embrace the *subjects* while living; the second, when dead and at dissection; and the third, the discussion of the *subject* at the dinner table! Now will not some of our scientific friends take up the matter and carry it out? what an opportunity to "enlighten and to charm," by a course of literary, historical, scientific and anatomical addresses, affording a broad field for practical observation and experiment, and rendering an essential service to the agricultural community, far greater than the perusal of volumes of mere theory.

The above splendid flock of sheep has been purchased by Messrs. Hesser & Nell; and they will supply the market weekly, for some time to come, with the choicest mutton, at their stall, in Market street below Twelfth, at prices to suit the times, say from 6¼ to 8 cents per pound.

Major Reybold has the thanks of the community, for his zeal in the cause of the improvement of sheep husbandry, and he richly deserves them. J. Lettsom.

Philadelphia, Feb. 20th, 1843.

For the Farmers' Cabinet.

The necessity of a change of Crops.

Messrs. Editors,—In a conversation the other day with an intelligent friend, I stated the remarkable fact, that if an animal were to be confined to one particular diet for a certain number of days, sickness and eventually death must be the consequence; when he immediately applied the *rationale* of the fact to a subject at once so highly interesting and natural, that I cannot help recording it. "Then," said he, "this shows at once the necessity of a change of food to the crop; or, which is the same thing, a change of crop to the soil—a *rotation of crops*, as it is called." Now in this little remark, a volume is thrown open to our perusal, and by studying it, I believe we may derive information and advantages at present unknown and unappreciated: and in return for the many useful hints and very pleasant ideas that I am continually reaping and garnering up from the perusal of the Cabinet, I offer the above, in grateful acknowledgment.

J. Dale.

From the Cleveland Daily Herald.

Butter Making.

Travelling across the Western Reserve, a year or two since, in company with a gentleman from New York, I was surprised to hear him state, that "in the eastern markets, *Ohio butter* was a by-word, a term synonymous with *dirty butter*.

I attempted to defend the character of the production of our dairies, and we compromised matters for the present, by agreeing to rest the decision upon the samples we should meet with, on the tables of the public houses in the course of the journey. In the end, I had the mortification to find, in a majority of instances, either an oily, rancid, or a ring streaked and spotted article was set before us, that came within the limits of his description.

This should not be. Butter is one of the staples of northern Ohio, and that which is well made, will, in all instances, command a cash price sufficient to compensate the dairyman for the extra labour he bestows upon it.

My wife and myself claim the merit of being adepts, or as political demagogues would say, "*real workies*" in this business, founded on a practical experience of near 20 years.

Our method I will detail; first premising that it is perhaps no better than that pursued by many others, for there is here and there a family that furnishes a prime article, though a large share of that which comes into market, is of an opposite character. The publication of our method may induce others to throw more light on the subject. In our hands it is invariably successful, but it is like certain chemical processes, made up of a series of manipulations, the omission of any one of which, may derange the whole and endanger the result. Every part must be carefully carried on.

1. *Choice of cows.*—A judicious selection from the common stock, I deem to be equal, if not superior to any of the imported. The Devons and Bakewells I have tried, and found them deficient in the quantity of milk they afford. The Durhams I have not tested. The Gore breed was introduced into Portage county some years since, by a gentleman, I think, of the name of Thorndike, from Massachusetts. A few of the descendants and crosses are to be met with in the south part of Trumbull county, and they prove to be the best of milkers. The quantity and quality of the milk, surpass that of any other breed in our section of the country.

2. *Change of pastures.*—To insure the production of the largest quantity of butter, a frequent change of pasture is required. A farm should be so fenced that the cows can be changed into a different lot every four or five days.

3. *Salting.*—A constant and full supply of salt should lie before our cows in some secure place. They will eat moderately what they require. If only occasionally furnished, they often take it in quantities so large, as to act medicinally to their injury. It corrects almost any bad quality of the milk, arising from the eating of aromatic, or bitter herbs, and also much of the natural animal odour, that frequently impairs the sweetness of butter.

4. *Water.*—It is perhaps superfluous to add, that without a full and steady supply of this article for his cows, the hopes of the dairyman will never be realized. Driving them once or twice a day to a watering place, will not answer the purpose.

A large and deep excavation can be made in the several pasture lots, or between two or three of them, so as to answer the purpose, except in very protracted droughts. It should be so enclosed that cattle can approach it and drink, without running into it.

5. *Driving—kind treatment.*—Many a faithful cow has been seriously injured by a careless boy driving her furiously to and from the pasture. All harsh treatment of any kind, as scolding, striking, kicking, &c., is also detrimental. I have known many cows rendered worthless from these causes. The utmost kindness and gentleness of manner must be shown on the part of those who manage our stock. I once dismissed a hired man for striking my cows. Too much cannot be said on this point.

6. *Milking.*—This process should be done systematically, at regular periods of the day. Sun-rise and sun-set are perhaps the best periods; for immediately after the one, and before the other, cows in hot weather feed to the best advantage. They are so much creatures of habit, that the milker should be changed as rarely as possible. A stranger is always regarded as an unwelcome visiter, by a milch cow.

7. *Cleanliness with the utensils.*—The pans, pails, strainers, bowls, churn, and every implement employed in butter making, must not only be well washed, but they must be thoroughly scalded with boiling hot water, and be perfectly dried afterwards, either in the sun or before a fire. This must be repeated every time they are used. Merely pouring boiling water upon them when loaded with sour milk or cream, will only serve to scald in the bad flavour, if I may use the expression. Wash them at

first, and then scald them thoroughly, if you would have sweet butter.

There are certain filthy practices which slatterns fall into, that should be corrected—such as wetting the cow's teats with milk, and permitting it to drop into the pail—milking in the morning without washing the hands, &c.

8. *Milk-house and buttery.*—In hot weather a good spring-house is necessary for the making of butter. It must be constructed of either brick or stone, and in no instance of wood, as that article never fails, in such a situation, to become mouldy, and impair the flavour of butter. It must be built so that it can be thoroughly ventilated. A window should be placed on the north, east, and west sides, which must be furnished on the outside with wire gauze screens, and on the inside with tight shutters. During the day, the shutters must be closed, and at night must be raised.

A spring may be dispensed with—and it is even problematical whether it does not, upon the whole, do as much injury by imparting dampness, as it does good by lowering the temperature. A well constructed house without the spring, will answer the purpose. It should be shaded with trees, or arbours of grape-vines. All mouldy and decaying wood-work, boards, boxes, barrels, &c., must be kept out of it—also all foreign substances, as meats, fish and vegetables. The air of my spring-house was ruined for a week or more, merely by placing in it a few mackerel.

At the approach of autumn, a cool and well ventilated buttery, shaded well without, and kept clear of all foreign substances that can impart a bad flavour, is preferable to a spring-house, as the latter becomes too damp, at that season, to allow the cream to form well.

9. *Straining the milk.*—This should be attended to without delay, after milking. The new fashioned tin strainer (a tin pail with a wire gauze strainer) is far preferable to the old fashioned cloth strainer. Either tin pans or stone crocks may be used for holding the milk; I know of no preference, except the tin work is liable to rust in a damp spring-house. Earthen crocks should never be used, as the lead in glazing may act chemically with the cream or butter, so as to poison it.

10. *Skimming the milk.*—In hot weather the milk may be allowed to curdle before this operation is performed, but if it be delayed any longer, a thin, watery fluid will form between the milk and the cream, after which the good qualities are inevitably destroyed. It is necessary, in mid-summer, to skim the milk every morning and night. This point must receive the strictest attention. Neglect of it often gives a streaked or mottled appearance to butter, as well as impairs its flavour.

11. *Cream.*—As soon as it is collected it should be placed in a stone crock, which should be either hung into a well, or set up to the brim in the spring within the milk house.

It has been thought by some that the cream improves, or matures, by exposure to the air after it is collected, and that placing it in a situation as cool as a well, or spring, is unfavourable for that change. This view may be correct late in autumn, when it becomes sometimes necessary to mature it by artificial heat, but during our hot and dry summers, we believe the course recommended is to be preferred.

12. *Churning.*—This operation must be resorted to as soon as a supply of cream is obtained, and in hot weather cannot safely be delayed beyond the third day.

A variety of patent churns have been palmed upon the public, none of which, we believe, is to be preferred to the old fashioned, upright dasher, or the barrel. We at present employ the former, and by the aid of a well adjusted spring pole, connected with the top of the dasher-rod, can fetch 12 or 15 pounds of butter, in from fifteen to twenty-five minutes, without any violent efforts. The barrel-churn is not as easily cleansed.

13. *Working of butter.*—This must be repeated until every drop of the buttermilk is expelled; twice or three times will be necessary, nor must it be delayed too long, till a change begins to take place in the remaining buttermilk, as that will impair the flavour of the butter, which no subsequent treatment can restore.

The operation must be done in a bowl, by the aid of a wooden spatula, or paddle, and in no instance should the hand come in contact with the butter, if it can be avoided, as the warmth of the individual renders the butter oily and bad flavoured.

Some persons destroy its sweetness and richness by washing out the buttermilk, by means of cold water, a practice always to be avoided.

14. *Salting.*—The salt should be added at the commencement of the first working. Much of our western butter is injured by the employment of the common New York salt. The finest *ground* article should be used. It can now be obtained in sacks, of our merchants, at a reasonable price.

15. *Preserving butter.*—That made in the spring and summer, may be laid down in *stone* crocks, and the surface covered with brine of strength sufficient to bear up

an egg. In winter this will answer all the purposes of cookery, and even for table will be sweeter than much that finds its way there. J. P. Kirtland.

Rockport, October 14th, 1842.

For the Farmers' Cabinet.

The Galvanic Plant and Tree Protector.

Messrs. Editors,—If you have seen the Galvanic plant and tree Protector, or are in possession of a more minute description of it than has appeared in our late papers, you would confer a favour, by giving the necessary directions to a mechanic to make it, and giving the public his address.

A Subscriber & lover of fruit.

Dec. 21st, 1842.

We have caused one of the Protectors to be made for the inspection of our friends, and it may be examined at our office. It is neatly constructed by a first-rate workman, Mr. W. H. Orr, No. 344, Market street, Philadelphia, who is ready to supply them of the following size and price, viz: 6 inches diameter at top, 4¾ inches diameter at bottom, 4 inches deep.—Price 37½ cents.

In the "Gardener's Magazine," for April, 1841, conducted by J. C. Loudon, and published in London, there is a particular account of this very curious contrivance, contained in a letter from the inventor to Arthur Aikin, Esq., Secretary of the Society of Arts, from whence we copy the following interesting particulars. Mr. Walker says, "I have had these Protectors in use in my own garden for twelve months, and can assure you that, although during that period, plants on all sides have suffered from the ravages of the molluscæ, not a plant has been injured that has had the protection of the galvanic circle. The annexed drawing and description will exhibit the apparatus, and explain its operation. It consists of a somewhat conical ring of zinc, of the following dimensions, viz: 6 inches in diameter at top, 4¾ inches at bottom, and 4 inches in height. The top edge is flanged off, say half an inch, and cut into zigzag or vandyke points. Immediately under this flange, a ring of thin copper is neatly fitted, being exactly of the taper with the zinc ring, and one inch broad, forming a copper hoop around the zinc; this copper ring is fixed in its place by means of a dot of solder, in three or four places. Such is the apparatus, and its operation is thus: the bottom of the zinc ring being pressed into the soil until the copper ring is about an inch and a half above the surface of the earth, the molluscæ, &c., may crawl up the zinc with impunity, but on coming in contact with the copper, will receive a galvanic shock, and immediately turn away or fall to the ground. I have repeatedly watched them, and have observed they were extremely cautious in approaching a second time. In fixing the Galvanic protector, care must be taken to enclose within it the rods which are required for the support of the plants; otherwise the molluscæ would find a ready way to the plant by them. The apparatus acts in wet or dry weather, and is therefore always in action. Its appearance when in use, is like a vandyked flower-pot, and its cheapness, neatness, utility and durability must ensure its general adoption.

"I believe the same principle may be applied to walls, &c., for the protection of fruit trees; straps of zinc and copper being placed in contact with the tree and along the wall; in this arrangement the copper might be made to clip over or embrace the edge of the zinc."

Thus far Mr. Walker. Mr. Loudon goes on to say; "The sensation of galvanism is produced by placing in contact plates of zinc alternating with plates of copper, and a piece of moistened cloth between each. Now, if a snail or slug be placed on a plate of zinc, to which a narrow plate or strip of copper is fixed near the edge, and the zinc turned over it so as to form a rim of zinc, copper and zinc, it creeps unmolested on its surface, until it touches the rim where the copper is, when it receives a galvanic shock—its moist, soft body, acting as the moistened cloth—and immediately recoils, twisting itself back, and rarely ventures a second time to touch the copper. To protect a plant or crop, then, it is only necessary to have a zinc plate of sufficient length to surround it, of five or six inches broad, with a strip of copper one inch broad, riveted to the upper part of the strip of zinc, and the zinc turned over it so as to

form a rim: the plate, so prepared, is then to be set on edge round the bed or plant. We have had one circular rim made with the copper on the *inside* instead of the *outside*, and having enclosed a number of snails and slugs in it, we find them hitherto, effectually imprisoned; and this we conceive to be a more efficient test of the galvanic influence, than employing it to protect a plant; because in the latter case, the creature may turn for food elsewhere, but in the former, it must starve, if it does not cross the galvanic battery."—Ed.

P. S. It must be added, Mr. Walker is not certain that the galvanic arrangement operates on *dry* animals; but on the mollusca tribe it does, powerfully.

For the Farmers' Cabinet

Ants and their Cows.

In an interesting article in the last number of the Cabinet, mention is made of a singular little animal, from which the ant is accustomed to collect honey with a regularity equal to the dairyman.—During the perusal of a late publication, I have met with a more particular account of this most singular fact, and believing that the generality of your readers will be as much gratified as I was by the perusal, I send it for insertion in your next, if space can be spared, and remain, A Subscriber.

January 19th, 1843.

Unparalleled and unique in the animal kingdom as this history may appear, you will scarcely deem the next I have to relate, less singular and less worthy of admiration. That ants should have their *milch cattle*, is as extraordinary as that they should have slaves. Here, perhaps, you may again feel a fit of incredulity shake you. But the evidence for the fact I am now stating being abundant and satisfactory, I flatter myself it will not shake you long.

The loves of the ants and the *aphides*, (for these last are the kine in question) have long been celebrated; and that there is a connection between them, you may, at any time in the proper season, convince yourself; for you will always find the former very busy in those trees and plants in which the latter abound; and if you examine more closely, you will discover that their object in thus attending upon them, is to obtain the saccharine fluid, which may well be denominated their milk, that they secrete.

This fluid, which is scarcely inferior to honey in sweetness, issues in limpid drops from the abdomen of these insects, by two setiform tubes, placed one on each side. Their sucker being inserted in the tender bark, is without intermission employed in absorbing the sap, which, after it has passed through the system, they keep continually discharging by these organs. When no ants attend them, by a certain jerk of the body, which takes place at regular intervals, they ejaculate it to a distance; but when the ants are at hand, watching the moment when the aphides emit their fluid, they seize and suck it down immediately. This, however, is the least of their talents; for they absolutely possess the art of making them yield it at their pleasure; or in other words, of milking them. On this occasion, their antennæ (feelers) are their fingers; with these they pat the abdomen of the *aphis*, on each side alternately, moving them very busily; a little drop of fluid immediately appears, which the ant takes into its mouth, one species (*Myrmica rubra*,) conducting it with its antennæ, which are somewhat swelled at the ends. When it has thus milked one, it proceeds to another, and so on, till being satiated, it returns to the nest.

Not only the *aphides* yield this repast to the ants, but also the *cocci*, with whom they have recourse to similar manœuvres, and with equal success, only in this case the movement of the antennæ over their body, may be compared to the thrill of the finger over the keys of a piano forte.

But you are not arrived at the most singular part of this history—that ants make a *property* of these cows, for the possession of which they contend with great earnestness, and use every means to keep them to themselves. Sometimes they seem to claim a right to the aphides that inhabit the branches of a tree or the stalks of a plant; and, if stranger ants attempt to share their treasure with them, they endeavour to drive them away, and may be seen running about in a great bustle, and exhibiting every symptom of solicitude and anger. Sometimes, to rescue them from their rivals, they take their aphides in their mouth; they generally keep guard around them, and when the branch is conveniently situated, they have recourse to an expedient still more effectual to keep off interlopers—they enclose it in a tube of earth or other materials, and thus confine them to a kind of paddock, near the nest, and often communicating with it.

The greatest cow-keeper of all the ants, is one to be met with in most of our pastures, (England) residing in hemispherical formicaries, which are sometimes of considerable diameter. I mean the yellow ant of Gould. (*F. flava.*) This species, which is not fond of roaming from home, and likes to have all its conveniences within reach

usually collects in its nest a large herd of a kind of aphis, that derives its nutriment from the roots of grass and other plants, (*Aphis radicum;*) these it transports from the neighbouring roots, probably by subterranean galleries, excavated for the purpose, leading from the nest in all directions; and thus, without going out, it has always on hand a copious supply of food. These creatures share its care and solicitude, equally with its own offspring. To the eggs it pays particular attention, moistening them with its tongue, carrying them in its mouth with the utmost tenderness, and giving them the advantage of the sun.

Our yellow ants are equally careful of their aphides. After they are hatched, when their nest is disturbed, conveying them into the interior, fighting fiercely for them if the inhabitants of neighbouring formicaries, as is sometimes the case, attempt to make them their prey, and carrying them about in their mouths to change their pasture, or for some other purpose. When you consider that from them they receive almost the whole nutriment, both of themselves and larvæ, you will not wonder at their anxiety about them, since the wealth and prosperity of the community is in proportion to the number of their cattle.—*Kirby & Spence's Entomology.*

Care of Animals.

All kinds of animals require much care in cold weather, or at any season when shut up, in order to preserve them in good health and condition. For want of attention they frequently become diseased and die, or grow poor, to the great loss of the owner. And it is frequently the case that animals thus treated, or rather neglected, consume about as much food as would be necessary to keep them in good health and flesh, with proper care. Salt should be given to animals occasionally, both as a means of thrift and preventive of disease.

By the free use of salt we have known severe disorders that have appeared among a herd of cattle, first mitigated to a mild form, and finally arrested before going half through the stock, when, without some preventive means, such diseases would have prevailed through the herd.

In cold weather salt should be given in small doses, lest it open the pores and produce colds. Wood ashes mixed with salt, in the proportion of four to seven quarts, to a quart of salt, is considered excellent for stock, as it promotes an appetite and prevents diseases. It will prevent bots in horses, and rot in sheep.

We have given this mixture with evident success. Cattle and sheep will generally eat it freely. Horses are more particular than most other animals, as to what they eat or drink. Some of them will not eat this mixture. In such cases mix a small quantity of ashes with salt at first, and put them on roots of which the horse is very fond, and in this way he will get accustomed to eating this wholesome *condiment.*

Animals should have a good supply of pure water. Some persons think that sheep do not need water in winter, when they have access to snow; but if such persons will supply them with water, they will see their great mistake, not only from the decided preference which the animals give to water, but from their superior condition; and the advantages will be evident by the greater number, size, and superior condition of the lambs. Sheep will go a considerable distance after water, and go oftener than cattle, after they have first been coaxed or gently driven to it, that they may know where to find it.

Cattle should be fed regularly, and have but a small quantity of fodder at a time, as they will breathe upon it and render it unpleasant or offensive. To prevent this in some measure, the cattle-house should not be boarded up in front, excepting above the heads of the cattle, and one board at bottom to keep the hay in its place. Then the breath of the animals will pass off with less injury to the fodder, and afford good wholesome air for respiration.

Boys should be early taught to feed stock, as it is a business that requires much experience and a sound judgment, according to the kind and condition of stock, the fodder, weather, &c. But they should have the advantage of constant instruction and superintendance of some one of riper years. This supervision is necessary, where boys are faithful and attentive. In some cases boys are negligent, and then it becomes more important, as they may manage somewhat like the old negro, who threw all the hay to the master ox, and requested him to divide it among them.—*Farmers' Journal.*

Good Old William West, the celebrated and successful farmer of Delaware county, always had a large bed of compost, duly and properly prepared in the field he intended to plant with corn, wherewith to dress it. He raised fine crops and improved his farm, and left a good example for others to follow. It was a maxim with him "to be kind to the soil," and he reaped his reward.

Query, was there ever a farmer who annually prepared and applied a good bed of compost to his corn, who did not thrive and prosper in his calling?

For the Farmers' Cabinet.

Hampshire Bacon.

Messrs. Editors,—I am an emigrant, a native of Hampshire, England; that county so famous for bacon—the county of Berkshire, being as noted for hogs. Now, many of your readers may consider these terms somewhat synonymous, but nothing is more evident to all Hampshire-men, than that there is a wide and essential difference, plainly discernible to four of our five senses; namely, to our sight, smell, taste and feeling. To what these differences are owing, might not be so easy to say, but that there is something real in it, is palpable to all; and especially in the fact, that all over England, it is known and acknowledged.

Although no longer a practical farmer, I read the Cabinet; for I am like an old stager, and often find myself pawing the ground at the sound of the ploughshare in early spring; feeling extreme interest in every thing that relates to the theory and practice of agriculture, and often turning to your pages with great delight: my last perusal having led me to the re-examination of the cut of the Hampshire hog, page 121, of the fifth volume, which has been the cause of my addressing you at the present time. And here let me ask your readers, whether they do not perceive a peculiar softness in the animal there so faithfully portrayed, indicative of delicacy of texture and tenderness; far different to the rotund form and peculiar thriftiness of the improved Berkshire, which, it is admitted, portend a hardihood in the hog, but which, in my estimation, is the cause of a *hardness* in the bacon. Certain it is, that in Hampshire, we always prefer a deep-sided hog to a barrel-shaped animal, knowing *that* to be the true criterion of "streaky bacon;" but by this, I do not mean a slab-sided brute, but one with a deep side, pretty equal in thickness through its whole length, without those enormous masses of muscular meat, forming such protuberances at the shoulders and hams, which have been trumpeted forth as the perfection of the pure Berkshire. There, also, a soft, woolly coat is preferred to a thin shining one—which is again the boast of the Berkshires; nor do we care so much for the qualification, "to be able to live upon nothing;" satisfied, if they pay for what they eat; as the farmer's business is to grow crops for the support of beast as well as man, and content, if he can bring his hogs to a good market.

But the fatting of these hogs I believe to be almost peculiar to that county; for, diverse as may be the articles forming their diet at the commencement of the fatting process—some commencing with raw, boiled or steamed potatoes, carrots, parsnips, with a mixture of meal, peas, beans, or oats, &c., yet it is held a *sine qua non*, that they be finished with barley-meal, mixed either with milk or water. This gives to the meat a peculiar firmness, which prevents waste in cooking, and gave rise to the old adage, "A good hog grows half in the pot." At the time of slaughtering also, they are not scalded, but the hair is singed, by covering them with wheat straw and setting it on fire: this communicates a particular flavour to the meat, and is thought to add much to its good quality; although to those unaccustomed to the practice, it might be considered not the most delicate way of doing things. Then again, the salt which is used in curing, is made from sea-water, the crystals large, and quite free from magnesia and other impurities; and the most careful rubbing, turning and tending the sides of bacon, is observed while lying in the pickling trays; the process ending, by exposing them, now called flitches of bacon, to the smoke of a smouldering fire made with saw-dust, for many days, in large smoke-houses built for the purpose. All these manipulations at length furnish an article, that, once tasted, the flavour long abideth.

In my walks, I sometimes meet a fine Neapolitan sow, the property of a gentleman who purchased the animal at a high price a great distance from home; and incurred the expense of her carriage, in the hope of introducing another and a new excitement. She is all but destitute of hair, and if I might be permitted, I would ask, is it not rational, is it not natural to presume, that to enable the creature to bear the cold and vicissitudes of the weather, she has been endowed with powers of endurance in the shape of a hard and inflexible texture of skin and muscle, by no means likely to produce that delicate cellular frame of body, so essential, and so observable in the real Hampshire breed of hogs.

Since writing the above, I have seen at the Union drove-yard, on the Ridge-road, Philadelphia, two pens of 10 hogs, part of them belonging to Mr. Frantz, of Paradise, Lancaster county, which come up to my standard of the "beau ideal." On all of these the hair is white, soft and fine, but upon four of them the coat is peculiarly long and curling, with a skin of fleshy hue, indicating a mellowness of handling, that cannot be mistaken. Here is the deep flat side, with an even length from *stem to stern*, such as is indeed seldom witnessed. They are supposed to weigh from 5 to 700 hun-

dred pounds each,—say, therefore, about 600 on an average; and are a cross between the Chester county and the English Hampshire breed. Need any more be said! Indeed they are real *Windsor Castles!* T. R.

Chester county.

Winter in Russia.

Under the head of "Winter at St. Petersburg," we find the following in the *Constitutionel*:—says the Ledger:

"Winter is more variable at St. Petersburg than at Moscow; that is, the cold does not reign there with such continued severity. Thus, for instance, it is said not to be a rare circumstance at Moscow, to find a fruit peeling, or any other matter thrown by chance from a window, catch on the balcony, and becoming immediately frozen, remain there suspended for the most of the winter. Such a case could not occur at St. Petersburg, where, although the thermometer often descends to 30 degrees of Reamur below zero, (35½ below zero of Fahrenheit) the neighbourhood of the sea combats the icy winds of Siberia, and unexpectedly brings on the most strange changes in the temperature. It has never rained in the memory of man at Moscow, during the months of December and January. At St. Petersburg, on the contrary, rain frequently falls during these two months, and at that period it has been constantly the custom to replace carriages by sledges. This latter kind of vehicle, which no person gives up, becomes the most convenient in the world, being driven in the midst of snow and mud. The winter at St. Petersburg, on account of these sudden transitions, so unexpected and so rapid, is far more formidable than at Moscow, and to strangers, who have not experienced its effects, is particularly serious. To defend one's self from the weather, the most constant and minute precautions are required.

"In October, the Russians, and all who have been long in the country, assume fur clothes, and keep them in continual wear until the month of April, after the ice has broken up on the Neva. Stoves are lit everywhere, and each family lays in a stock of birch wood, the blaze of which is more abundant than of any other wood. There is a servant especially employed to attend to the stoves, and his duty is to keep up as much as possible, an equal heat throughout the house. The best stove-keepers, whose fame procures them a high salary, are generally from Moscow. Twenty degrees of cold, do not appear astonishing to an inhabitant of St. Petersburg, though he then casts a curious look at the thermometer. At 23 or 24 degrees, constant rounds are made during the night, to prevent the police and sentinels from falling asleep on their posts. Should the cold bring on drowsiness, and the sufferer not be able to prevent himself from yielding to its influence, he must perish, as he can only wake from his sleep in the other world. At 25 degrees the theatres are closed, and all those who are obliged to go out on foot, hurry along with their utmost speed, most anxiously looking at the nose of all whom they meet in the street. If a sudden paleness—of which no intimation is given by any physical feeling—should appear on that part of the face, the passer by, rushes forward and commences rubbing the afflicted feature of the alarmed passenger with snow, to produce animation.

"The same thing may occur to the operator before the hour is over. At 30 degrees of cold, the populace alone go out of doors, entire families shut themselves up, and not a single sledge of any appearance of fashion is seen in the streets. Yet even then the military reviews are not interrupted, and the highest dignitaries, up to the Emperor himself, repair to them without a cloak. It must be evident that, with cold of such intensity, the sufferings of the poor must be dreadful. Yet it may be affirmed, without exaggeration, that the lower classes in winter, suffer less in Russia than in France. There are placed in the various quarters of every large town in the empire, public establishments heated by large stoves, where every person that pleases, may take refuge. Dreadful accidents undoubtedly mark the arrival of the severe season, but they generally fall on the servants of Russian noblemen, whose carelessness towards their servants' comfort, is akin to barbarity. It must not be forgotten either, that three-fourths of these accidents are attributable to the abuse of spirituous liquors. The passion of the people for brandy, sets at defiance every warning, and in winter it becomes more than usually fatal."

The Search after Rest.

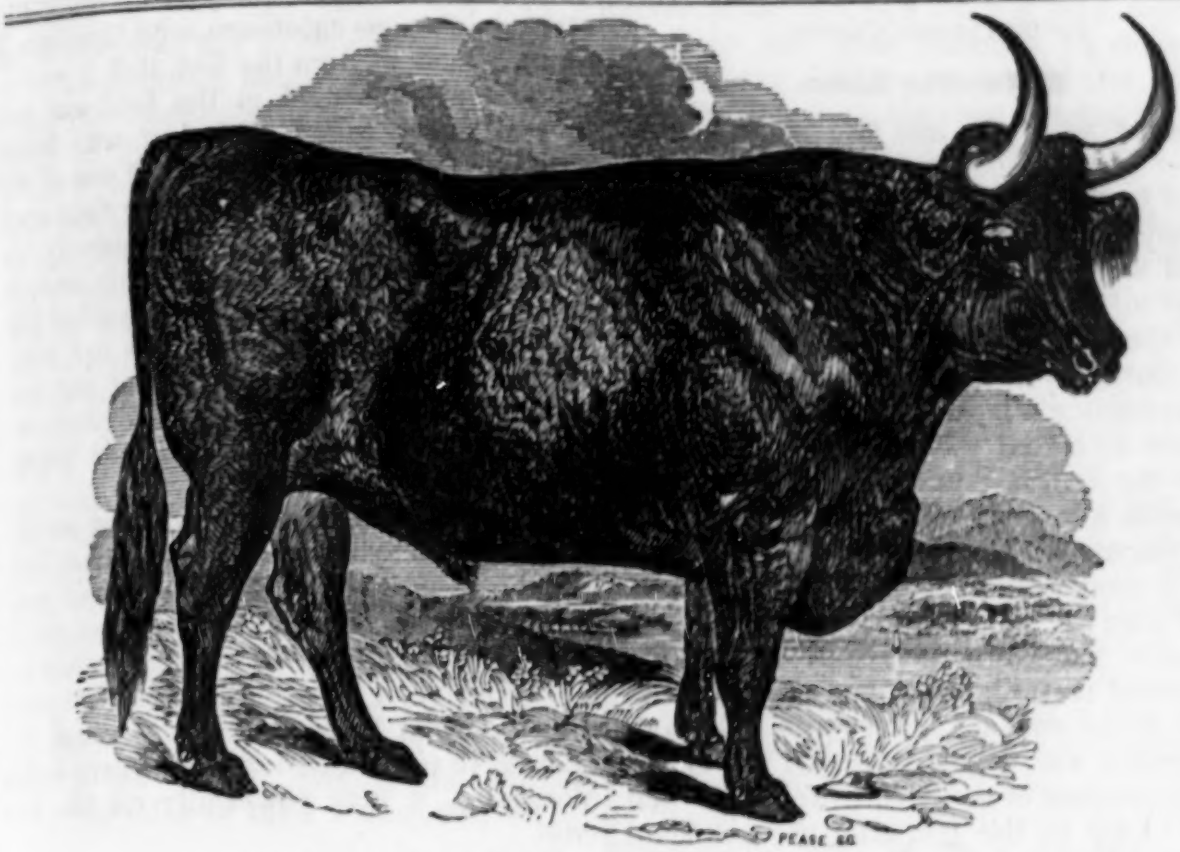
By J. Cunningham.

When first the Dove, afar and wide,
Skimmed the dark waters o'er,
To seek, beyond the heaving tide,
A green and peaceful shore,—

No leafy bough, nor life-like thing,
Rose 'mid the swelling main—
The lone bird sought, with faltering wing,
The hallowed Ark again.

And ever thus man's heart hath traced
A lone and weary round;
But never yet, 'mid earth's dark waste,
A resting place hath found.

The peace for which his spirit yearns
Is ever sought in vain,
'Till, like the Dove, it homeward turns,
And finds its God again. [*N. Y. E. Post.*



THE ANGLESEY, OR NORTH WALES OX.

The Anglesey cattle are small and black, with moderate bone, deep chest, round barrel, high and spreading haunches; the face flat, with the horns long, and almost invariably turning somewhat upwards. The hair is apparently coarse, but the hide is mellow; they are peculiarly hardy, easy to rear, and well disposed to fatten. The young of this breed, have little more than hay-tea and gruel, with the common broth of the house to subsist on; and when reared, are in a manner totally abandoned; their best treatment being, oat or barley-straw, scarcely enough to keep them from starving, while folded in an unsheltered yard; the face of the country and the nature of the soil affording but little provision for winter feeding. Such treatment would deteriorate any breed, less hardy than that of the Island of Anglesey; the practice of the middling and small farmers, and indeed many of the largest, of selling off their best yearling heifers and keeping the poorest only, for the dairy and breeding, and the culpable and general neglect of selecting good bull calves, as also the want of proper enclosures, by which the steers could be kept from the rest of the stock, contribute to increase the deterioration. Many experiments have been tried, in order to improve the breed, but it was difficult to find another race sufficiently hardy, to withstand the climate and privations to which they were exposed; and although the first cross might seem to effect a change for the better, the native Anglesey blood would predominate, and the produce breed back; and after a few generations, there would be the original breed again, scarcely altered; or if so, for the worse, by being deprived of a portion of its hardihood. It is true, the cross with the Lancashire bull would give an increase of size, amounting to 50 pounds per quarter, when three years old, and even a propensity to fatten quickly; but generally speaking, no permanent improvement has been derived from crossing; but dearly-bought experience has forced upon the breeder this truth, that it is false economy to starve a growing breed.

The Anglesey cattle are principally destined for grazing; great numbers of them are purchased and prepared for the Smithfield market, where their size—an intermediate rank between the English breeds and the smaller varieties of Scotch cattle, renders them an object much sought after: and if they are somewhat longer in preparing for the market, than some of the favourite English breeds and the Scotch, they often pay more at last; and they will thrive where an English beast would starve. The North Wales cattle were formerly used very extensively for the plough; they were docile and hardy, strong, active and willing; but would have been better adapted to the purpose of draught, if longer in the leg and less deep in the chest. They have a peculiarly noble appearance, a stateliness of gait and a haughtiness of countenance; a projection of the breast and lofty bearing of the head, not recognized in any other breed, and strikingly in contrast with the mild intelligence of the Devon, and the quiet submission of the Hereford. No more cows are kept for the dairy, than are sufficient for the home consumption.

For the Farmers' Cabinet.

Magnesian Lime.

Observing in the last two or three numbers of the Cabinet, various opinions with regard to the use of magnesian lime, I will give my own experience in connexion with that of some others, and leave the inquiring reader to judge for himself.

In the sixth month, of 1837, I applied 1000 bushels of Schuylkill slacked lime, said to contain a large portion of magnesia, to about 15 acres; the soil was so thin that under the most favourable circumstances, as to season and good cultivation, I could not have calculated, without the aid of artificial means, upon more than from 12 to 15 bushels of corn to the acre. In the autumn of the same year, I perceived a trifling improvement in the appearance of the grass, which in the ensuing spring, was still more perceptible, and which continued up to the commencement of the severe drought of that year. Late in the fall, after the abundant rains, the blue grass sprang up quite thick through the poverty grass which had heretofore covered the surface. Early in the spring following it was ploughed, but not so deep as I should otherwise have done, wishing to avoid burying the lime too deep. Between the 24th and 27th of fourth month, it was planted in corn, and as the soil was very thin, I had it run out full four and a half feet wide, and planted in the rows about two feet apart. It came up well, and continued remarkably healthy and vigorous, through the whole season. It had three dressings with the cultivator, and was hoed only enough to smother the grass between the hills; the result was from 35 to 40 bushels per acre. I think I should have had at least five bushels more to the acre, but for a violent storm early in the eighth month, of rain and wind, which prostrated the whole field in such a way, that it never afterwards stood upright, besides which, a great deal was broken entirely off. The same fall the field was sown in rye, and the spring following, with timothy and clover seed; it has now the appearance of land of *more* than a medium quality. It may be remarked that about one-fourth of this field was not limed; but the corn was manured in the hill, with hog-pen manure and wood-pile scrapings, which were decidedly beneficial; the corn was still not to be compared with the part that was limed; and a transient observer, at the distance of a mile, at this day, could hardly fail to notice the improved appearance of the part that was limed, over that which was manured.

The combination of magnesia, or some other deleterious substance, with this lime, I think is evident from the fact, that it was in the first place hauled in the field and put in two piles: when spread, it was taken with due care from the bottom of one of the piles, so as not to leave it thicker than upon the surrounding ground; consequently the corn grew equally well upon this spot, as upon the other parts limed. The other pile, from some accidental cause, was not taken away so carefully—upon this spot the corn came up, but soon withered and died, nor has any thing more than a stinted vegetation grown upon it since.

This experiment, I think, shows conclusively the following results:—first, that lime, although containing a large portion of magnesia, is an excellent fertilizer, when put on in *moderate* quantities. Secondly, when put on lavishly, it *destroys* vegetation:—and thirdly, when spread upon the grass, and allowed to remain two or three years before ploughing, it acts powerfully on the first crop.

Whilst on the subject, the writer will take occasion to say, that the district of country in which he resides, (Harford county, Md.) now has access, through the medium of the tide-water canal and the Conestoga navigation, to the inexhaustible beds of limestone, in both York and Lancaster counties. The qualities of this lime vary materially—some is said to partake *largely* of magnesia, other of magnesia and slate, other of magnesia and sand; and other again, with but a *small* portion of magnesia. The writer of this thinks he feels warranted in saying, that of this latter description, from 3 to 400 bushels might be applied to the acre, without any injurious effect, yet he is convinced that no advantage could result to the crop that would justify so lavish an application. Economy would forbid it. If from 50 to 100 bushels per acre, admitting it may have in it a portion of magnesia, will produce a crop which in a general way appears to give satisfaction, I can see no inducement to make so large an outlay of capital, unless it be to *prove* that pure lime is perfectly harmless, notwithstanding the quantity put on—whilst we *dare* not use the magnesian lime so lavishly.

I have been the more disposed to take up my pen, from reading an article in the last number of the Cabinet, over the signature of Isaac Wayne Van Leer. I acknowledge my own experience in the use of lime is limited; but I will venture the opinion, that all past experience is against his unqualified denunciation, not only of magnesian lime, but from the anecdote relating to Colonel Brooking, in connexion with some other ex-

pressions, of *pure lime also.* Now can it be possible, that this writer can be so wedded to his own notions, backed by a few corroborating circumstances, as to imagine that his views on the subject can ever be endorsed by an *intelligent* and *experienced* public! Well might the supposed query of the *Magnesians* occur to his mind:—"How can it be that so many of our intelligent farmers have been so deceived?" But I do not believe that he could so easily answer that question to *their* satisfaction as to his *own.* I have no idea that his views on the subject will draw in the reins of a single team, of the hundreds engaged in hauling lime and limestone, in Lancaster, Chester and Delaware counties, and composed of as fine draught horses as could be found in any other three adjoining counties in the Union, *maugre* the far-fetched theory, that they had been eating and drinking in, the insidious and poisonous effects of magnesian lime, ever since the day of their frisking and gambolling by the sides of their robust and sturdy dams.

That lime acts more or less advantageously on different soils, will be readily conceded, as well as that on some soils, it is entirely inert; but this I suspect is very rare. That there may be also worn-out land, naturally of good quality, but owing to its locality, out of the reach of artificial manure, thus compelling the owners to avail themselves of the only means within their power for improvement, is most strikingly exemplified in the neighbourhood of Deer creek. Long since the recollection of the writer, the crop of wheat seldom repaid the costs of cultivation; and a fat bullock, except for family use, was more rare than are 6 to 800 *now*, annually fatted for market;—and this improvement has all been brought about by the very means proposed: namely, plaster, clover, ploughing in the latter, and an increased attention to making and saving manure. I could name individuals who had brought their lands to a state of productiveness not often surpassed, yet since the facility of getting lime, and being further spurred on by a visit during the last spring, through Chester and Delaware counties, and becoming convinced to their own entire satisfaction, have since commenced liming with great spirit. My next neighbour, a practical farmer, having brought his lands to a high state of cultivation, and whom I have often heard say that he would not give one bushel of plaster for 100 of lime, has got rid of his scepticism, and is also now liming largely, say from 3 to 4000 bushels per annum. His first experiment commenced two or three years ago, on a field of about 20 acres, being part of a tract of poor, worn-out land, he had then recently purchased at about three dollars per acre. His crop of hay on this field the last season, was not much short of 40 tons. He has since limed nearly the whole of this farm, which promises an equal return to his industry and enterprise. Similar conclusive instances might be multiplied without limit, among which there is one other, having a direct bearing upon the erroneous opinion, that "a second liming has no good effect," with which I must beg the indulgence of taxing the patience of my reader. I had some business during the past summer with our estimable Chief Judge, S. A., who had been for 10 or 15 years in the way of getting lime delivered to him at 28 to 30 cents per bushel; I found him in his meadow with five or six mowers, apparently luxuriating in the pleasure of converting a poor worn-out old field, formerly washed into gullies, and covered over with nothing but sedge grass, into one now yielding to the scythe a swarth that might well satisfy a Chester county farmer. I made some remark upon the abundance of the crop, to which he replied, "this is the effect of a *second* liming,"—repeating with a smile, a saying which he had often heard, "that if the *first* liming put a man *in* jail, the *second* would take him *out* again." He assured me, that wherever he had given his land a second liming, the effects were equally striking, and that his crop of corn the preceding year, on a field of about 15 acres, had yielded 55 bushels to the acre. His then growing crop of corn was on a field which had been limed the first time, about four years since, succeeded the next year by corn, the spring following by oats and clover, and shortly after cutting the oats, a second dressing of lime was applied. From the appearance of the growing crop, I have no doubt the product must have been from 50 to 60 bushels to the acre. A great portion of the farm presented equal evidences of improvement: but the most surprising part is yet to be told. This farm consists of about 400 acres, the soil *naturally* not the best. At the time he commenced liming, he had not for 10 years previous, *owing to its poverty*, pretended to cultivate anything more than a potatoe and corn-patch, which with a few tons of swamp hay, constituted his stock of provender for a horse and a few cows. He appeared very much to regret having lost 10 years of improvement. At the commencement, for want of experience, he had put on some lime in too wet a state, and it did no good; his neighbours discouraged him, by telling him "the soil was too poor to improve by lime, it must first

have a body by some other, *more* active means; that lime *might* then improve it—but until then, he was assuredly throwing away his money." I need hardly say their scepticism is cured, and they are with an enlightened and commendable zeal, and with equal success, now following his example. The lime used in the above instance, in common with all other which we have access to, had also its portion of magnesia. Some six or eight years ago, I recollected to have heard him say, that since he had been liming, he could raise good corn and grass, but that his crops of wheat were not very much improved; this occurring to me at the interview just related, I reminded him of it, at the same time inquiring what was his present experience? His reply was, "that at that time he had limed none of his land but once, that *now* his crops of wheat were good;" inviting me at the same time to go with him to a field recently cut, but still in the shock. It was apparently quite a full crop for our best creek lands.

From all these circumstances taken into consideration, is it not evident that the different opinions resulting from the use of lime, must in a great measure, be owing to the different varieties of our soil? I believe it is a generally admitted fact, that plaster acts more powerfully on some lands than others, and also that on some lands it appears to have no effect whatever. Ought not these considerations to admonish us to qualify our publicly expressed opinions, when they are likely to come in conflict with the long established opinions of others! I hope our respected authors, whose views I have endeavoured to refute, will impute to me no other motive, than a desire to render harmless, opinions which, if followed, would paralize to an incalculable extent, our present progress in agricultural improvement.

A Deer Creek Farmer.

Harford county, Md., 10th of Second mo., 1843.

For the Farmers' Cabinet.

Kitchen Gardens.

"Horticulture, the attendant and embellisher of agriculture, which provides so many palatable and healthful additions to the substantial produce of the field, and correctors of the undue stimulus and acrimony of much animal food, merits all the fostering care which an uncorrupted and yet educated and refined taste has ever extended to it. A well cultivated garden, in due alternation of vegetable, fruit and flower, gives us poetry without its illusions—nature divested of her ruggedness, and art of its constraint."

I was so much struck with the beauty and truth of the above extract from Dr. Bell's preface to his Treatise on "Regimen and Longevity," that I concluded I would copy it, and send it to the Cabinet. I am an old farmer, and the longer I have lived, the more value have I placed upon my *Kitchen Garden.* By using this homely term, I would not by any means, exclude from its "border," the "rose, the honey-suckle and the tulip," and the thousand other kindred plants of beauty and perfume, that nature has thrown abroad for *woman* to care for, and manifest her taste in rearing. It is always delightful to see the farmer's wife and the farmer's daughter steal a half hour from her "in-door" duties, and go forth at "even tide," to plant—to weed—to train—"to dress and to keep" her own "rosy plantation." It seems to me a taste of this kind, cannot fail to be chastening in its effects; and it must have a decided tendency to multiply and elevate the enjoyments of the farmer's household. But this is altogether a digression. I was going to talk about the *value* of a kitchen garden—and behold, I have run off to the ladies and the roses! But *they* will forgive me—will not also the *Cabinet?*

I began this article with an intention merely to say, that I think farmers generally, place far too low an estimate upon the great variety of articles that may be produced from a tolerably well attended garden. An hour or two spent in it every day before breakfast, will keep a pretty good sized one in fine order; it will furnish the table with a great variety of the best vegetables that conduce to health and comfort, and will make it the *most profitable* spot on the farm. For to my certain knowledge, it will save the *pork tub* and the *meal barrel*, to an extent that the farmer himself will be surprised at, who has heretofore neglected this little spot. The season is approaching for attention on the part of farmers to this subject. Let its importance be properly appreciated.

Z. Y.

Gooseberries are much less apt to mildew, when trained so as to admit the air freely to circulate among the branches: the fruit too will be finer, if there be but one stalk in a hill, instead of a great cluster, as we often see. Soap-suds from the wash tub, sprinkled over them, for three or four weeks in succession, before blossoming, it is said are a great preservative, and will hardly fail to ensure "fine, fair, and large berries."

On the benefit of laying land to grass.

The great restorer to an exhausted soil, and enabling it to bear productive crops of grain, is *rest*; by laying it down with the artificial, or common grasses, for three or more years,—then ploughing it up again for a course of grain crops. The advantages obtained by thus devoting arable land to pasture, are incontestible, and are derived from two causes;—first, that the grasses, being in their nature somewhat distinct from grain crops, the decomposition, or the exercise of their affinities, and the required proportions of the elements of vegetables, must be equally as distinct. On instancing any of the clovers, saintfoin, lucerne, &c., we observe they send down their main roots deep into the soil; therefore, acquire a large share of their support from a stratum lower than the generality of grain; nevertheless, their side-roots, penetrating just under the surface, collect those other necessary portions of nourishment contained in the soil, which they do with facility in the first instance, because the land is fresh to their efforts, by their exerting affinities, differing from the roots of grain; but after a few years, these grasses grow stale to the land, and their efforts cease to be so successful as when first exerted; and from this cause, produce less and less, according to the nature of the plants. But in the same degree, the land recovers its freshness for grain, which, when again sown, yields with redoubled increase; but since some of the grasses approach very near to the nature of wheat, oats and barley, they cannot, on that account, effect so great a change; therefore, they yield a less favourable pasture for the growth of wheat, oats and barley, than if they were more opposite in their distinctive qualities—the clovers for instance.

The second cause of advantage is derived from the turf, the dead leaves and decayed stems; these latter, during the formation of the turf, falling down among the living stems and roots, create in time, by their decay, a stratum of dark mould, from the carbon yielded by the decomposition of the vegetable substances, and which decay is promoted by the close shade of the growing plants. Grass, whenever it takes root, begins forming a mould beneath, of a vegetable or decomposable nature; and therefore must, from this circumstance, acquire a part of its nourishment from the atmosphere; or this collection could not be made, except from what the plant may retain, of all dust or soil fortuitously dropped, the excrement of animals, &c., and with these, it establishes itself stronger and stronger; and this mould gets more and more blended with the soil by the rains, frosts, the workings of insects and worms, &c., proportional to the time it is suffered to remain unbroken up; but when this is done and ploughed under, it forms a rich coat of manure.

These, then, are the two causes of benefit arising from returning, for a period, arable land to grass; but it is necessary to observe, that in so doing, and with a real view to the improvement of the land, as well as to its present and future profits, the previous treatment must be taken into consideration, as also the management it ought to receive when in a state of pasture; because, if the grasses are sown upon an exhausted, foul soil, neither the immediate, nor the future produce can be great. And even if the produce of the pasture—the result of a good preparation—be carried off for green food, hay or seed, and no manure brought back, the grain crops will disappoint the expectations of the husbandman, whenever he returns it to arable. It is the fact, that land is like an animal fattening—the better and more liberally it is treated, the heavier will be the profit; and the husbandman should bear in mind continually, that "out of nothing, something cannot come:" therefore, if he is desirous of having large and profitable crops of corn or grain when his lays are broken up, his plan ought to be, to sow his grasses on a well cleaned soil, and feed off the crops, or manure liberally, if the hay or seed be more valuable to him when disposed of elsewhere; then his anticipations will be *as liberally* rewarded, and of this, he need never doubt.

In some countries, the first step towards breaking up old lays, especially when covered with a coarse and harsh sod, is to pare and burn the surface. To an inexperienced observer, such proceeding will certainly appear rash, since he would naturally say, the fire must destroy the greater portion of the valuable vegetable materials that had accumulated during the time the land was under grass; but from the continual practice of paring and burning with positive benefit, it appears nearly certain, that there cannot be the amount of loss which persons, on a first inspection, might with justice suppose; or if there is, it is more than compensated for, in another way. To be satisfied on this point, the merits and particulars of the paring and burning system, should be examined—thus, when a turf has become, by long lying, a favourable nursery for insects and worms, grubs, &c., which, on the breaking up again of the land, are ready to invade the fruits of the husbandman's toil, by instantly devouring what he may sow, when

in a state of youthful vegetation, and in consequence, defeat his object in a greater or less degree, however rich the land might be—to obviate this evil, nothing seems to present so effectual a remedy, as the paring and burning of the turf, which destroys, in the most certain and expeditious manner, all insects, eggs and worms, contained therein. Again, if the land, during a state of pasture, has been neglected, and the seeds of weeds have been suffered to fall, the fire destroys them all at a blow. Also, very old and neglected lays are frequently filled with the strong, woody roots of large weeds and small shrubs, that from their solid nature, require years of common cultivation to decompose; and with land that is poor, the balance of affinities is too strong to decay, readily, the tufts of grass and weeds, even when turned under by the plough; which, therefore, with the woody roots, roll about under the plough and harrow for years, preventing the grain from growing healthily, by the too great hollowness they occasion to the soil; at the same time, existing, for the first year or two, a mass of rubbish, of half-alive, half-dead turf, which not only robs the grain of its nutriment, but keeps in existence the insects, grubs and worms, and exhibits to the eye after harvest, a worse surface for the plough to manage, than before it was broken up. To remove all these evils, fire has been resorted to, as the best and most expeditious agent; and thus far, the importance of paring and burning all very old and sour lays, is manifest. But in the operation, experience confirms the propriety of not carrying the heat of the fire to too high a temperature; and the criterion is, when the soil that is calcined with the turf, is still black; for it is admitted on all hands, that to carry the heat so far as to burn the earth *red*, is a loss, not only in the combustible materials, but injurious to the soil burnt, especially if that be a clay, which will thus be rendered but little better than brick or stone. With roots, turf, &c., the true object is, just to break down their texture by gentle combustion, and to avoid dissipating their gaseous materials, any more than is necessary to maintain the fire; at the same time, keeping the heaps covered by throwing on, with judgment, a portion of the adjoining soil, so as to arrest and combine with, as large a portion as possible of the soot, or whatever else arises in the form of gas with the smoke. By this means are formed dry, powdery materials, containing soot, wood-ashes, charcoal and blackened earth, which together form an excellent manure for all fresh broken-up lands. And the question is, how do the ashes operate as a manure? to which it is replied, these ashes, having had their old affinities overturned by the fire, and their new ones, which are most active when applied in their fresh state to the soil, act in part as lime and in part as vegetable manure; and with judicious after-tillage, a strong fermentation takes place; and then the fertilizing process commences.

The application of hot ashes, from the effect of paring and burning, and turning them in with the plough, is of great importance; even the *best lands*, when first broken up, from a state of pasture of only a few years standing, are found extremely altered, as respects their fitness to bear at once delicate vegetables; while the *poorer* lands must be in a worse condition still. Land of any description which has been unexposed to the sun, air, rains and frosts, for a few years, becomes raw, harsh, and cloddy; with all its former silkiness or delicate tenacity, or easy yielding to the pressure of the foot, gone. If a piece of earth be taken from under the turf and examined in the hand, it will be found porous, from the road-ways of worms, insects, and decayed roots; cold, raw, and hard, and bound together by the living fibres of the late grass; having its affinities in so strong a state of balance, in consequence of the same species of plants growing for a series of years on the same surface, that a clod of it, which is little better than a stone, until thoroughly reduced by the plough and exposure to the seasons, will resist decay and change for a great length of time: and whilst the land is in this state, it is impossible for it to afford nourishment to the roots of plants requiring nice cultivation; because, if they are sown upon it, it is too hard to admit the tender infant roots within those parts that have not been already searched and exhausted by the roots of grass; and where they have been so traversed by them, they have effected so strong a balance, that the roots of the young and delicate fresh plants, are able to obtain only the smallest portion of nourishment; and also, the former roots, rains and worms, having left the soil hollow and porous, the succeeding rains, instead of being absorbed, and thus retained by the soil, do, in a great measure, escape through the old channels; and these watercourses presenting only old saturated surfaces to the contact of fresh showers, arrest no new fertility, and what fresh air may gain access to the interior, by following the vanishing water through the soil, only meets with the same old chambers, whose sides have long since been saturated. From these circumstances, every fertilizing shower that falls, may be said to be lost; little or no fermentation takes place after it; or there is a

complete stand-still; and therefore, no food is yielded to the infant plants, with their decomposing powers too weak to gain support by decaying the old grass roots, they consequently die of starvation; the old grass roots thus left, remaining in a state of comparative preservation, until some more powerful vegetable grows above them, or tillage or manure effects their overthrow. The seed sown on this exhausted soil might, and indeed it does grow at first, from its own resources, and from the air and moisture collected in the immediate neighbourhood; but the plants soon afterwards present to the eye a stand-still of all farther growth; maintaining a mere existence by the falling of a few timely showers perhaps, then perish.

The above aids are required by plants of delicate habits, and which need nice cultivation; the almost only vegetables of the edible and grain kinds that have sufficient decomposing powers to succeed, even on good land, when broken up from old pasture, being the hardy sorts of the potatoe, the tare or vetch, and the common grey pea; but it is far best, not to plant or sow *any* crop on fresh broken upland, until it has been properly prepared by the fallow-tillage, and manured with lime, ashes, &c., because the immediately depriving the land of the energies it may possess when broken up, retards the progress of its after improvement, in a more than two-fold degree.—*Bland's Agriculture.*

For the Farmers' Cabinet.

Lime.—Practice versus Theory.

In a late number of the Cabinet, your correspondent, Mr. Van Leer, says he has "repeatedly offered $100 to any of his neighbours, that would show to competent judges, where a second application of magnesian lime, (no difference how long before, or in how small quantities the first application was made,) had done any good whatever." I quite regret his not having extended the offer to *all* of his acquaintance, as $100 would not be unacceptable to some of us farmers, who are either obliged to sell our wheat at 75 cents per bushel, or wait for an advance in price.

If Mr. Van Leer would take the trouble to accompany me over my farm, I would not only show, but I think, convince him, that a second application of lime had *very* materially improved the quality and productiveness of the soil. When I purchased this farm, some eight or ten years since, I found considerable difficulty in collecting animal and vegetable manure, sufficient for a coating for five *acres;* I now find as little difficulty in manuring *fifteen.* The barn formerly held both hay and grain, and was some seasons not full. Now, it will not hold more than one-half, perhaps not that. I have been using lime for several years, nearly 1000 bushels per annum; last year, the quantity used, exceeded that amount. I have still more conclusive evidence at hand: I have, in every instance, reserved a portion of the field unlimed, in order to ascertain whether or not lime was of any benefit. As the former owner was of Mr. Van Leer's opinion, that lime did *his land* at least, no good; and he no doubt, was honest in the conclusion, for its maintenance did not harmonize with his interest, I was the more particular in making my experiments, staking out the part left unlimed, and frequently passing through the successive crops, in order to ascertain whether or not the lime had improved them, with some person unacquainted with the circumstances; the division line, however, between the limed and the unlimed, would be uniformly discovered—and not unfrequently, some 40 or 50 yards before we arrived at the spot; for, in many instances, the crop was more than doubled; and that too, where this was the second coat of lime. The quantity of wheat and oats in two of my fields last year, was not one-half as great on the unlimed as on the limed portion, the disparity being so perceptible, that the men in cutting across the fields, observed the difference the first stroke given with their cradles in it, without a previous knowledge of the cause.

Now sir, if this is not *prima facia* evidence, and that too, that will convince Mr. Van Leer himself, I would suggest the propriety of his extending the offer of his spare change, at least the *trifling* sum specified, to any one who will show to competent judges, any benefit derived from a second application of lime.

If lime was not universally known to benefit the soil, it is not *very* likely there would be now more than a thousand times the quantity used in this vicinity, than there was 15 or 20 years ago; for people are quite as much opposed now, to extra labour that does not benefit them, as they ever were.

As I do *not* anticipate receiving a "golden plough" for this essay, I will not give my name in full, until the *distance* of the $100 offer is extended.

Respectfully yours, &c.,

N. R. D.

Albern, Feb. 21st, 1843.

THERE are cases, in which a little common sense is of more worth than a great deal of calculation.

Isothermal Lines,

Are those circuits around the earth, where equal degrees of heat are experienced. These lines are parallel each side of the Equator, until the 22nd or 23d degree of latitude; at those parallels they begin to diverge, and at 36 degrees and 40 degrees, begin to be altogether irregular. In the Northern hemisphere, one line of equal annual temperature, runs through Rome and Florence, in latitude 43 degrees north; and through Raleigh, in North Carolina, in latitude 36 degrees; and through the Netherlands, latitude 51 degrees; and Boston, in New England, latitude 42 degrees. Edinburgh, in latitude 55 degrees, averages also with Boston. Ulco, in Lapland, latitude 66 degrees, ranges with Lake Winnepeg, in latitude 54 degrees. M. Kupffer, the Russian traveller, states that the temperature of the air and soil varies the most rapidly, near and beyond the 45th degree of North latitude in America and Europe. The difference will be more readily appreciated, by comparing Edinburgh, with all its elegance and luxuries, its palaces and halls of learning, its gifted scholars and polished society, with Labrador in the same parallel of latitude, on the eastern side of the West continent, locked in the silent thraldom of icy desolation; inhabited by a few straggling Esquimaux, in huts of snow, with no other clothing than the skins of wild beasts, and depending for subsistence on sea-dogs, and other ocean monsters.

The heat and weight of the atmosphere diminish, as we ascend from the level of the sea. These facts are proved by the observation of travellers, ascent in balloons, by the zones of vegetation on the sides of mountains, by the rarity and want of elasticity in the air, and by the excessive cold at great elevations, as well on those under the line, as those near the pole. At the foot of mountains, under the Equator, spring the fruits and flowers of the tropics; then follows a zone of the olive and the vine—then the broad leaved forests—then the fir and the pine—then the dwarf willows, stunted shrubs, evergreens and mosses; and last, the crests of never changing snow.

There are yet other known causes of the variations of temperature, but why the air in any given place should be mild and genial one day, and chilled by frost, or scorched by heat, on the next day following; or why one period should be occupied with one extreme, and the succeeding by another; or why one season should be racked with all extremes, in quick succession, are mysteries which neither chemistry, mathematics, nor natural philosophy have ever yet penetrated, or revealed. Electricity is known to have a powerful agency in atmospherical phenomena, and doubtless extends its invisible influence over every part of organised matter. It seems to be a kindred element with heat, and what are now the obscure results of their joint action, may at some future day, resolve the mysteries of meteorology, in connection with the variations of temperature.—*Hunt's Magazine.*

May, 1842.

To Prevent the Decay of Wood.

Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train-oil. Heat them slowly, gradually adding four ounces of bees'-wax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use. What remains unused, will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish crown, or red or yellow ocre, or any colour you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thin as you can; some days after the first coat is dried, give it a second. It will preserve plank for ages, and keep the weather from driving through brick-work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given; and in all compound machinery, the separate parts should be so varnished, before they are put together; after which, it will be prudent to give a third coating to the joints, or to any other part which is peculiarly exposed to the action of moisture; such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all timber which is near, or within the ground. Each coat should be dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metalic vessels in the open air. For when oil is brought to the boiling point, or 600° of Fahrenheit, the vapour catches fire; and though a lower degree of temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

For the Farmers' Cabinet.

Disease of the Plum Tree.

Messrs. Editors,—My attention was called a few days ago, to an article in the New Genesee Farmer, on the "Black Canker," as it is called, in the plum tree. As there seems to be some difference of opinion in regard to the origin of the disease, I embrace this opportunity, through the medium of your valuable periodical, to make known the result of a few observations, on what I conceive to be the origin of this disease.

From the examinations which I have made of the trees in this vicinity, I have arrived at the conclusion that the disease in question, is produced by the deposit of the eggs, and the subsequent evolution of the *larva* of an insect, which I believe to be identical with, or allied to, the *ægeria exitiosa*, well known as the insidious destroyer of the peach tree.

Previous to my having detected this insect upon the plum tree, I occasionally met with it in my garden, in the act of collecting honey: when thus employed, it is rapid in its motions and difficult to capture. Amongst those taken upon the wing, or reared from the pupa, I have not detected a single female, and on examination, I find they agree in many particulars, with the figure and description of the male of the peach tree insect—"*ægeria exitiosa*,"—as given by Mr. Say, in his North American Entomology.

Many of the perfect insects varied in size; but this variation, I suppose to depend in a great measure upon the quantity of food afforded them while in the larva state. In some instances I have observed them to be larger or smaller, according to the size of the branch which they occupied.

One half of the follicle* which encloses the pupa of this insect, is formed by a slight excavation in the wood of the tree, sufficient to receive the lateral half of the body, the remainder is composed of small pieces of bark, connected together by the web of the insect, and resembles, in appearance, the follicles found at the root of the peach tree.

The pupæ have two semifascia of spines, upon each segment of the abdomen, except the three last, which have but a single row only, agreeing in this respect, with the pupa of the peach tree insect, above mentioned. The object of these spines appears to be, to assist in propelling the body forward, and to effect this, the insect has recourse to a rotary motion. In one instance, I made a small opening in the end of a follicle, next to the head, and in a short time the pupa escaped from it, while in an upright position, and in the manner before mentioned.

This accounts for the *exuviæ*† being often found at some distance from the follicle, generally extruded half way through an orifice in the outer bark, in which position it is left by the insect, where it may frequently be seen at this season of the year.

On the 20th of last August, I examined a tree of the blue damson plum in my garden, which was very much diseased; larvæ nearly full grown, together with pupæ in different stages of maturity, were found in the same diseased branch; not more than three or four empty follicles were found, showing, that up to this period, but few perfect insects had escaped.

The pupæ and follicles which I obtained, were placed under a bell glass in my house, and I find by referring to my Entomological journal, that by the 2nd of September, they had all, with the exception of one, undergone their final metamorphosis: upon opening this follicle, I found the pupa had been entirely destroyed by a number of small larvæ, which occupied the interior; these in a few days changed into pupæ, without enclosing themselves in separate cocoons, as I have observed in one instance, of a parasite of the peach tree insect.

About the beginning of September, I renewed my examinations of the trees; no pupa were now to be found, the empty follicles indicating that they had all taken their flight. Here and there, I detected a larva, which was very feeble and appeared to be diseased; but they, notwithstanding, exhibited considerable tenacity, as they lived several days without food, under a bell glass. From the 1st of September until the beginning of October, I did not succeed in detecting any pupæ in the trees, but occasionally I met with a larva which appeared to be in the condition above mentioned. My attention being very much absorbed by professional duties about this period, I neglected to observe their farther progress, but I intend, during the next summer, to continue my researches, with a view to discover more of their habits and economy.

W. D. H.

West Chester, Pa., Feb. 1st, 1843.

We trust our friend will be good enough to furnish us with the result of his researches, in relation to this subject. Should they lead him, or be the means of directing the attention of others, to the true cause of a disease which is widely deplored, he will merit the thanks of every lover of fine fruit. Ed.

* *Follicle*, a cocoon.

† *Exuvia*, the shell thrown off by the insect, when it assumes the winged state.

For the Farmers' Cabinet.

On the decrease of Fruit.

At the Quarterly meeting of the New Jersey Agricultural Society, held at Princeton on the 28th of the First month last, the following communication from Caleb Smith Green, President of the Society, was read. It has been kindly forwarded to us by the writer, and we hope it may lead to inquiries and suggestions, in relation to the subject matter, that may help to arrest the evils complained of.

In passing through some parts of New Jersey last summer, we were compelled to notice the unthrifty appearance of the apple orchards. There was a general scarcity of foliage. The leaf was pale and sickly, and inclined to curl at the edges and end: plainly indicating that something was at work, sapping the health of the tree. And these evidences of disease, were by no means confined to the apple orchards of New Jersey; they extended widely around Philadelphia; and we hope they will not fail to command, as they certainly deserve, the very close attention of practical men.—Ed.

One of the advantages which we possess in the present day, over our brethren in former times, is that of communicating our ideas and experience on agricultural subjects, and in return receive the views and experience of others, through the medium of the various periodical Agricultural papers, which are now published in our country. I desire to avail myself of this method of conveying to you some observations on the subject of fruit trees and their diseases, as they now appear in this part of Jersey; and solicit your investigation and communications on the subject. It is of great importance to this part of the country.

Cherries, plums, peaches, pears, apples, are all diseased. The Morella cherry trees are all dead; occasioned by many protuberances on the bearing twigs. The plums are fast following them of the same disease, there being very few in a thrifty bearing condition. The pears and apples are following, though with a very different complaint. Some years ago, a remarkably thrifty pear tree, with fruit of superior quality, exhibited rough places on the skin of the fruit, which cracked some depth into the pear, by which that side of the fruit was spoiled. Some time after, a year or two, the September butter pear was attacked in the same manner; the roughness covering the pear almost over, and cracking in many places, so that the fruit was, and is worthless. As the land was a close loam, a dressing of lime was given, at the rate of 50 bushels to the acre, with a good portion of manure, which put the land in an excellent state. Notwithstanding, the disease increased, spreading over the fall and winter Vergaloo, and many others, so much so as to make them of small value. The Seckel pear is the only kind that has escaped. Most of the pear trees in this district, are in the same condition.

But this is not the greatest loss.—The apple trees, for some years past, have been getting the same disease; the following facts have come under my observation:—In an orchard of 10 or 12 acres, having a large variety of fruit, the trees remarkably thrifty; on a loam and shell soil; sound land, excellent for wheat and clover; on which about 100 bushels of lime per acre, had been spread in twelve years, and well manured; twenty-three years since, the trees were set in the orchard; they are now at the best age for the bearing. The land has been kept under continual cultivation, except in the rotation one or two years in clover, that the soil might be kept open, and the roots have free course to spread and enlarge. The trees have grown accordingly, and the loss and disappointment have been so much the greater. The Newtown pippin, Cider apple, Bellflower, House apple, and Pelican, are nearly spoiled—the other kinds much injured. Greenings, and Old England Red Streaks, are the only winter kinds that are fair, and they are fairer and larger than common. On some fall apple trees, the fruit is very fair and good. These thrifty kinds have individual and separate rows, and run, some of them, through the orchard, between rows and kinds only fit for the pigs. I have been more particular in describing the state of the land, trees and fruits, than may appear to others necessary, in the hope of laying a foundation for investigation by others. My mind for some time, was impressed with the idea that *over liming* was the cause, but observing other orchards where the land had not been limed, in the same condition, I was compelled to give up that idea. Other reasons have occurred to me—as the seasons; but that will not suit the case, for many kinds have been diseased for five or six successive years, while others have escaped. Also the state of cultivation: but that will not apply, for one orchard of four or five acres, has not been ploughed for 20 years, and it is in the same condition. Being unable to assign any reason for loss of fruit, or give any remedy for the disease, I now, with deep interest, refer the subject to my brother farmers, for their investigation and elucidation, hoping that some light may have been obtained by some who have been more fortunate in their investigations than the writer; and as this is a leisure season of the year, they will give us their views this winter, to prepare us for spring operations.

In conversation on the subject, at the Agricultural Society, a gentleman asked, "Have you ever thought what effect chips and rotten wood might have, as a remedy for the disease on pears and apples? My reason for making the inquiry is, I made my wood pile close to a forlorn apple tree that bore miserable fruit. It has since borne remarkably fine."

This brought to mind, the great quantities of fine fruit produced in this part of Jersey, years back, when the soil had much vegetable matter, not quite decomposed; also the fine apples that have arrived in our towns from the western part of the State of New York, the last season; the land of which is still full of undecayed vegetable matter. These statements give rise to the following questions: Is the acid produced by the decaying vegetable matter, essential to the apple tree? Or is the open state of the soil of a new country, the cause of the thrifty state of the trees and excellence of the fruit?

For the Farmers' Cabinet.

Planting Corn.

Messrs. Editors,—As your valuable paper seems to be a depository for hints for the improvement of farmers, I thought I would refer to my mode of farming corn, which you can make such use of, as you think proper.

Immediately after planting, I go over the ground with a large harrow, to level it. This I find a great advantage, in regard to economy of time, as with the large harrow the work can be better done, in one-fourth the time it will take to go twice in the row, with the common scraper. There is an advantage too, in doing it immediately after the corn is planted, for the ground soon gets a crust on it, when it does not break up so nicely. And if it is left till the corn comes up, a boy is then wanted to uncover; a job which is seldom well done. And the ground too being entirely level, you may afterwards work much nearer the corn. I have also found it an excellent plan to pass over the ground after the harrow, with a light roller. It makes the earth compact around the corn, and hastens its sprouting. Further, I would say, drop plenty of grains in a hill—it is far better to pull up, than to replant.

S. C. W.

Chester county, Pa., Feb. 20th, 1843.

To take grease out of silk.—Apply a little powdered magnesia on the wrong side, as soon as the spot is discovered.

For the Farmers' Cabinet.

To take Honey.

Messrs. Editors,—Believing it to be our duty to communicate any information we may possess, in regard to subjects of general interest, I beg leave, through the columns of your widely extended and useful paper, to give what I consider an important discovery in the management of bees, an improvement that supercedes the necessity of the brimstone match—a resort both cruel and unnecessarily destructive, as I will endeavour to show. The method is simply this,—in autumn, when you think your bees have done their best, instead of killing them, put them out to *board* with their neighbours. This is very easily done in the following manner: place the hive you wish to take, close by one you wish to *keep over;* raise the edge of each a little, so that the bees can pass easily from one to the other; slightly raise the top of the hive you wish to take the honey from, and puff in smoke pretty freely for a few minutes, and the work is complete. The bees will take refuge in the neighbouring hive, and you have all their labour of the summer. The two families will be found to agree well, and to subsist on what one would have devoured; and will throw off earlier and larger swarms in the spring. If any doubt the above, I can assure them, "there is no mistake," as the plan has been fully tested by myself and others for two or three years, and found to succeed admirably. Bee owners will do well to drive all their poor hives in this way, if for no other purpose than to save their lives; they are not so likely to be attacked by the moth as when they are but few and weak. Bees should never have much of a stock of honey on hand in the spring—they will not do so well; having no place to deposit eggs, they will not raise young bees soon enough for early swarms, which always do the best. Should you think these hints worthy of a place in your Cabinet, place them there.

Respectfully,

Josiah Cowles.

Hamptonville, N. C., Feb. 23d, 1843.

Cure for Warts.—In our paper of January 8th, we published a recipe for curing warts. Mr. H. M. Sanborn, of Brookline, called on us the other day to say, that he had cured all the warts on the hands of his son, by the use of the means therein recommended. That is, he scraped a *carrot* and salted the scrapings for a poultice, which he bound on the boy's hand on his retiring to rest. This was several nights repeated. —*Mass. Ploughman.*

For the Farmers' Cabinet.

Culture of the Gooseberry.

As the time for planting and pruning trees, &c., is fast approaching, I desire, in this short communication, to call the attention of our horticulturists and farmers to the very useful, though much neglected, gooseberry. It is generally considered, that the large, or English gooseberry, will not thrive well in this climate. I am, however, inclined to think that this is, in a great degree, an erroneous opinion, founded more on hearsay than actual experiment: nearly as much depends on the proper culture, as on the climate. A gooseberry bush should always be trained to one stem, and planted in an open lot—never against a fence: it should be well trimmed every spring, and particularly in the middle of the bush, nearly all the wood should be cut out; never allow two branches to rub against each other;—dig well around, and manure the roots at the time of pruning. If these simple precautions are used, mildew will rarely or never be seen; while the fruit will be both large and delicious. This I know from experience; indeed, it is entirely by these means, that the English gardeners have been able to bring this fruit to such perfection, as is seen in the gardens of that country.

According to *Tusser*, the gooseberry only became a garden fruit in his time, which was in the reign of Henry the eighth. In his "Five Hundred Pointes of Good Husbandrie," he says:

"The barberry respis,* and gooseberry too,
Look now to be planted, as other things do."

The fruit was undoubtedly very small at this time, as may be inferred from the surprise expressed by *Pepys*, who lived about a century after the time of *Tusser*, on seeing gooseberries "as big as nutmegs." It is not at all uncommon in that country, to see them as large as our largest plums. "The largest gooseberry ever grown, was a handsome *yellow* fruit, called *Teazer*, which was exhibited at a show at Stockport, in July, 1830, and weighed 32 dwts. 13 grs. The heaviest *red* berry on record, was the *Roaring Lion*, exhibited at Nantwich, in 1825, and weighing 31 dwts. 16 grs. The heaviest *white*, was the *Ostrich*, 24 dwts. 20 grs., shown at Ormskirk, in 1832. In the same year, a seedling green was exhibited at Nantwich, of the uncommon weight of 30 dwts. 18 grs." To this statement of the weight to which the fruit has sometimes been brought, it may be interesting to add, that a seedling plant of reputation, has been known to produce, when sold in lots, upwards of £32. This was a rare case, indeed; but it is said to be not at all unusual for 20 guineas to be brought in, by the distribution of a single bush, in rooted parcels.

Nothing now yields a better profit than fruit. Why then, should not farmers devote a little more attention to the culture of fruit trees? While they afford ample remuneration in the sale of the fruit, for the labour bestowed on them, they also add greatly to the appearance and comfort of a dwelling.

Many persons who have but small gardens, might plant a quantity of gooseberry bushes; and if in this case, there was not much gain, there would undoubtedly, be an improvement in the fruit, as well as an improvement in the health and morals of the people; for "whatever makes men acquainted with the peculiarities of vegetable economy, in however small a degree, has a beneficial effect upon the heart and understanding."

W. P. H.

Manayunk, Feb. 22nd, 1843.

P. S. Can any of your correspondents furnish the readers of the Cabinet, with the most approved anatomical forms of cattle, particularly the milch cow; this was suggested on reading the article headed, "Native Stock," in the last number of the Cabinet.

* Raspberry.

Grafting the Lilac on the Ash.—Mr. Scott, of South Carolina, communicates the following to a Southern paper:

This season I grafted the different species of lilac on the common ash, in accordance with some information I received from a friend, (Mr. Wolf, jr.,) while I lived in Paris. I do not recollect to have seen any account of any one having tried the same in this country. We have grafted about three dozen ashes, varying from four feet to ten in height, with the common and Persian lilac; and I am happy to say that the result has exceeded my most sanguine expectations; for we have grown about 25 healthy plants, with branches from one to eighteen inches long, which I hope in an another year, will be covered with bloom. They were grafted in April, after the lilacs had made considerable shoots. I would, therefore advise, that the scions be taken off in January or February, in order to retard their vegetating too soon for the stocks. Would not the pendulous ash form a beautiful object, by having its branches grafted with Persian lilac?—*United States Farmer.*

For the Farmers' Cabinet.

Comparative Nourishment of different kinds of Vegetables.

If, as an article in the last Cabinet, signed Vir., states, "the differences of opinion with regard to the value of root crops, as cattle feed, are indeed about as different as light is from darkness," the following table, showing the comparative nourishment of some of the principal kinds of vegetable food, may possess interest. The table was formed by Boussingault, an eminent French chemist—and he tells us, that he compared the result of his experiments with the practical experience of farmers, in feeding cattle, and found "a most remarkable coincidence between the theoretical and practical inference." It is found in a late number of the Boston Medical and Surgical Journal, and is as follows, viz:

White French beans,	100
Yellow peas,	120
Farina of cabbage,	148
" of carrots,	170
" of wheat,	175
Wheat,	191
French wheat,	193
Rye,	200
Farina of barley,	212
" of potatoes,	225
Barley,	232
Indian corn,	246
Potatoes,	1096
Carrots,	1351
White cabbage,	1446
Turnips,	2383

"Thus we see, that 100 parts of white French beans, are equivalent in nutritive power, to 120 parts of yellow peas,—to 1096 of potatoes, and 2383 of turnips. A farmer, for example, in feeding cattle, would find that 120 parts of yellow peas, would go as far in keeping up the strength and efficacy of his cattle, as 2383 parts of turnips." Or it would require more than 23 bushels of turnips, or two bushels of rye, to be equal in nutritive power to one bushel of white French beans.

These statements, it is believed, may be relied upon as approximating the truth; though the fact, that it should require nearly two bushels of wheat to equal in nutrition one of beans, may be a little startling to the political economist. When *farina* is given, as of cabbage, potatoes, &c., the meaning is, that the article was dried and reduced to flour, by grinding, or otherwise.

If acceptible to the editors, occasional facts and suggestions, in connection with agriculture, may be offered for the columns of the Cabinet, (already so rich in original and practical matter,) by the writer of this, whose birth-place was a farm, and whose fondness for the pursuit, induces him to hope, that in this way he may contribute his mite towards the advancement of this ennobling occupation. Index.

Philadelphia, First mo. 30th, 1843.

For the Farmers' Cabinet.

A Chester County Pig.—A hog was slaughtered in West Chester on the 22nd ult., weighing 900½ lbs. He was bought by me two years ago, when a shoat, of six or eight months old, and I sold him in the tenth month last, to Benjamin Walton, of West Fallowfield, who fed him. When the circumstances are considered, that he was not castrated until the fifth month last, and then ran on grass with but very little extra feed, until I sold him, it may well be asked, "*Can it be beat?*" Judges are of the opinion, that had he been kept another year on a moderate allowance of food, and then fatted, he would have reached 1200 lbs. J. Fulton, Jr.

East Fallowfield, Pa., Third mo. 1st, 1843.

Agricultural Premiums.

At a meeting of the Philadelphia Society for promoting Agriculture, held at their room in Washington Hall, South Third street, below Walnut, March 1st, it was on motion Resolved, that premiums be offered for the following objects, for the year 1843, viz:

For the best managed farm, over 100 acres, $20.

For the second-best managed farm, over 100 acres, $15.

For the third-best managed farm, over 100 acres, $10.

For the best managed farm, from 50 to 100 acres, $15.

For the second-best managed farm, from 50 to 100 acres, $10.

For the third-best managed farm, from 50 to 100 acres, Colman's Agricultural Tour.

For the best managed farm, under 50 acres, $12.

For the second-best managed farm, under 50 acres, $8.

For the third-best managed farm, under 50 acres, Colman's Agricultural Tour.

The above premiums will be paid in money, or a medal of equal value, except where Colman's Tour is offered.

The decision of the Judges will depend on the manure used and economy of management, as well as on the neat and good condition of the farm generally, and the amount of its products.

Committee on Farms.—Aaron Clement, Isaac W. Roberts, Lewis Willard.

FOR CROPS.

For the best three acres of wheat, $8.

For the second-best three acres of wheat, Colman's Agricultural Tour.

For the best three acres of rye, $8.

For the second-best three acres of rye, Colman's Agricultural Tour.

For the best three acres of oats, $8.

For the second-best three acres of oats, Colman's Agricultural Tour.

For the best five acres of Indian corn, $8.

For the second-best five acres of Indian corn, Colman's Agricultural Tour.

For the best one acre of sugar-beets, $8.

For the second-best one acre of sugar-beets, Colman's Agricultural Tour.

For the best acre of ruta-baga, or other turnips, $8.

For the second-best acre of ruta-baga, or other turnips, Colman's Agricultural Tour.

For the best acre of potatoes, $8.

For the second-best acre of potatoes, Colman's Agricultural Tour.

For the best ¼ acre of carrots, $8.

For the second-best ¼ acre of carrots, Colman's Agricultural Tour.

For the best ¼ acre of parsnips, $8.

For the second-best ¼ acre of parsnips, Colman's Agricultural Tour.

In judging the foregoing crops, particular regard will be had to the mode and economy of cultivation, and also to the cleanliness and condition of the ground.

Committee on Crops.—Samuel C. Ford, Henry Chorley, Samuel Ritchie.

Aaron Clement, Sec'ry.

March 6th, 1843.

THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

Philadelphia, Third Month, 1843.

The second Annual Report made to the Board of Managers, by Dr. Kirkbride, in relation to the "Pennsylvania Hospital for the Insane," has, through the kindness of some friend, been placed upon our table.

Of all the improvements which the broad philanthropy of the present day has introduced, perhaps no happier illustration of their efficiency can be given, than the change which has taken place in the treatment of the Insane. Any of us who have lived so long, and will revert to cases of insanity—that most fearful of maladies, to which we are exposed—that came under our particular observation, or with the history of which, we became acquainted, fifty years ago, either in our own, or other countries, and will again recur to the treatment of similar cases, at this time, cannot fail to be forcibly struck with the great degree of success which has obviously crowned the general effort to mitigate and remove this deep affliction. Instead of the horrors, which it is not our intention now, even to name—of what were at one time, most appropriately termed *mad houses*, we find the sentiment has taken deep and thorough hold of the public mind, that the unhappy subjects of insanity, should ever be regarded as those for whom we feel a deep and rational solicitude, and to whom we are accountable for every act which has relation to their welfare, as we are to every other diseased individual. Any one who will look carefully into the statements annually made, of the condition of our well conducted hospitals for the insane, will at once perceive the efficacy of this improved mode of treatment, and will feel his very spirit cheered by the numerous manifestations of the triumph of *mind*—of *moral suasion*, over a government of *force*. Religion and philosophy have providentially penetrated with a ray of light, the darkest part of that path, which all are liable to travel, showing, that even there, the characteristics and the privileges, and the requisitions of humanity, are still to be acknowledged.

On taking up the report alluded to, we found our attention so arrested, that we were unwilling to lay it down, till its perusal was completed; and we are much in error, as regards the feelings of our readers, if this reference to the subject, shall prove unacceptable to them.

The Pennsylvania Hospital for the Insane, is situated about "two miles west of Philadelphia, between the West Chester and Haverford roads, and is on a farm of 111 acres, of fertile and undulating land, upon which are groves of fine forest trees, and streams of running water. Its buildings, with the pleasure grounds, garden and deer park, comprising 41 acres, are surrounded by a substantial stone wall, more than a mile long, and 10½ feet high." The wall is so judiciously arranged, as scarcely to be seen from the Hospital, and is therefore, not continually presenting to the patients that evidence of confinement, which is apt to be so unpleasant to a diseased mind. Neither does it interfere with a view of the fine scenery beyond it. This noble and imposing structure contains 204 chambers for patients and their attendants, with all the other appendages of an establishment of this character, and upon so large a scale. A fund specially devoted to this purpose, by the Pennsylvania Hospital, has been used for the purchase of the land, erection of the buildings, and complete organization of the concern.

The greatest number in the Hospital at one time, was 127; and this occurred towards the close of last year. Of the 299 patients who have been admitted during the two years of 1841 and 1842, that it has been in operation, more than one-third have been discharged *cured*, or *much improved*. But among these admissions, were 81 from the Hospital in the city, who were considered decidedly incurable, and not offering the slightest chance for restoration. Deducting these, we find that more than 48½ per cent., of the original admissions into the new Hospital, have been cured, or much improved. A truly encouraging result.

Dr. Kirkbride forcibly inculcates—and it can scarcely be too frequently brought to view—the vast importance of *early treatment* in diseases of the mind. The friends

of the patient, as well as the physician, have but too often occasion to regret, when it is too late, that the best period for restorative treatment had passed, before proper means were resorted to. "Physical derangement is generally found to exist, and a *varied medical* treatment required for its removal." It is acknowledged that "there is no specific for the disease; and that each case requires its peculiarities to be studied with as much care, and its remedies to be directed with as much precision, as in any other species of illness." Here, however, as it appears to us, almost every advantage that can be hoped for, is offered to the unfortunate class, for whose benefit the munificence of the Pennsylvania Hospital has been thus extended. Writing, painting, drawing, and the study of various branches of learning, tend to beguile the tedious hours. The deer park, and the pleasure rail road, —various occupations, both on the farm, and in-doors —frequent visits to almost every point of interest, within four or five miles; as to the Mint, the Waterworks, Girard College, &c., together with an untiring watchfulness and judiciousness of treatment throughout, have abundantly contributed to mitigate the sufferings of the afflicted inmates of this Institution. The attendants, it is worthy of remark, have been enabled, during the past year, almost to dispense with the restraining apparatus of all kinds. Its use is of rare occurrence.

Had our limits permitted, it would have afforded pleasure to have gone much more thoroughly over the ground of the Report, than we have done. We leave the subject with a very sensible remark, which we find on the 30th page. "Insanity is a disease of such frequent occurrence, that whatever is done by any one, to lessen its terrors and to alleviate the sufferings attendant upon it, may ultimately be for the benefit of some in whom he is directly interested."

"The Bible in Spain: or the Journeys, Adventures and Imprisonments of an Englishman, in an attempt to circulate the Scriptures in the Peninsula; by George Borrow, author of the Gipsies of Spain." Published in Philadelphia, by James M. Campbell, 98 Chestnut street, at which place, or at this office, it may be obtained.

This is a very amusing volume, giving a lively narrative of what occurred to the writer, during a residence in Spain, whither he was sent by the Bible Society in 1835, as its agent for the purpose of printing and circulating the Scriptures.

With this magnificent country, probably the most fertile, and with the finest climate in the world, we are not so familiar, as with many other countries of Europe; and the volume before us throws much light upon subjects, with which we would willingly be better acquainted. With a system of husbandry, as wretched as the soil is fertile and the climate delightful—and a population centuries behind the age, in the meliorating influences of Christianity, it is perhaps, not surprising that our author should have observed in his social intercourse with the Spaniards, much that is noble and to be admired, as well as much that is lamentable and reprehensible—many evidences of stern, heroic virtue, and abundance of savage and horrible crime.

Although as it at present exists, the work was written in a solitary hamlet, in a remote part of England, where he had neither books to consult, nor friends whose opinion or advice he could occasionally avail himself of, and under all the disadvantages of enfeebled health, the author has nevertheless thrown into it, an unusual amount of animation and good spirit, and never exposes himself to the charge of being dull and prosing.

☞ Joseph Willis, who has for several years acted as agent for our paper in Delaware and parts of Maryland, is *no longer authorised to receive monies on our account*. Such of our friends as have heretofore paid their subscriptions to him, can, by availing themselves of the kindness of post-masters, or by other means, readily communicate directly with this office. When remittances are made by mail, receipts will be forthwith returned.

Our acknowledgments are due to H. L. Ellsworth, of the Patent office, Washington, for the "very beautiful sample of Kloss's white blue stem" wheat, furnished him by John Snyder, of Union county, Pa., as well as for his sample of Valparaiso wheat, just received from South America. They have been distributed among our friends.

The tobacco seed kindly forwarded, has also just come to hand—and we will dispose of it in the same manner.

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Where are manufactured, and for sale at low prices, Horse Powers and Threshing Machines, Fanning Mills, Corn Shellers, Straw and Hay Cutters, Horse Rakes, Ploughs of all kinds, and Harrows, Cultivators, Seed Planters, Cheese Presses, Churns, and every kind of Farming Implement generally in use. Also, every description of Implement made to order or repaired, by experienced workmen, and warranted. Slater's Patent Corn Sheller and Grinder; Plough castings of most kinds on hand. Also, a general assortment of garden seeds.

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☞ Short advertisements, the subject matter of which may be in character with this paper, will be inserted at the rate of one dollar for each insertion of ten lines, or less; and so in proportion for each additional line. The money to be paid in advance.

The Hamburg, or Poland top-knot breed of fowls, is said to be among the most beautiful, as well as abundant layers. Inquiry has been made of us, where any of the pure breed can be obtained. Can any of our friends inform us?

The quantity of rain and melted snow, which fell during the Second month, (February,) 1843, was rather more than two inches and a half. ..... 2.54 inches.

Pennsylvania Hospital, Third mo. 1st, 1843.

"THE FARMER'S ENCYCLOPÆDIA AND DICTIONARY OF RURAL AFFAIRS:

Embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by a *Practical Farmer*, assisted by numerous scientific gentlemen, is now in course of publication by Carey & Hart, of this city.

"The work upon Husbandry, now ushered before the American public, is the production of an English gentleman of great intelligence, assisted by some of the best authorities upon rural subjects, in his country. By collecting and condensing the most interesting details relative to farming, chiefly derived from living authors, such as Professors Liebig, Lowe, Sir J. E. Smith, Brande, Youatt, Stephens, Thompson, Lindley, I. F. Johnson, etc., etc., he has been enabled to present the very latest information, and furnish a fund of matter which cannot fail to attract all who take an interest in rural affairs, so long studied and so thoroughly understood as these must needs be in Great Britain.

"The absence of speculative views, with the very practical and matter-of-fact character of the information given upon all subjects treated of, will perhaps be found to constitute the highest recommendation of this work."

It will appear in semi-monthly numbers, and in addition to numerous wood-cuts, will contain 16 beautifully engraved plates, and will be completed in 16 numbers, at 25 cents each.

The courtesy of the publishers has placed the first and second numbers of the above work on our table. In looking through them, we have been entirely disposed to believe that the promise to throw before the public one of the most interesting works on Agriculture, will be fully realised. As a book of reference, embracing every variety of subject important to the farmer, its convenience and value will present a strong claim for a place upon his book-shelf. "To render agriculture more productive and beneficial to all, it is necessary that its principles should be better understood, and that we should profit more from the experience of each other." This experience will be detailed to a very great extent, in the Farmer's Encyclopædia. The points upon which the gardener, or the more extensive farmer, would seek information, will be found happily illustrated. The dairyman, the grazier, and the fruit grower, as well as those who are curious in flowers or in grasses, will find ample gratification in this work. To it we acknowledge ourselves indebted for the leading article—and we think it quite an interesting one—in our present number. It is handsomely got up, and we sincerely hope it may prove, as we think it should, advantageous to the publishers, as well as to the public.

The early part of this month has been cold. At six o'clock, in the morning of the 2nd inst., the thermometer stood at 18 degrees, and on the 3d, at 14 degrees, Fahrenheit, in this city.

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